Vision for Imagination

MACHINE VISION
LIGHT SOURCE CATALOG



Hikrobotics.com

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Guidance

Hikrobot Style Series

Hikrobot Style Ring Light MV-LRDS-H Series P.14



- High-density LED array design
- Available in models with various outer dimensions and irradiation angles

Hikrobot Style Shadowless Ring Light MV-LRSS-H Series P.23



- High lighting uniformity
- Available in models with various outer dimensions

Hikrobot Style Standard Bar Light MV-LLDS-H Series P.25



- Adjustable irradiation direction and angle
- Multi-side installation

Hikrobot Style Standard Flat Light MV-LBSS-H Series P.38



- Available in models with various outer dimensions and irradiation angles
- Mounting brackets on the sides for flexible installation

Hikrobot Style Flat Light with Hole MV-LBES-H Series P.42



- High lighting uniformity
- Available in models with various outer dimensions

Hikrobot Style Line-Scan Light MV-LTDS-H Series P.45



- The high-power LED lamp beads and the highly focusing structure realize the illuminance of 1000K lux on the surface of the light source
- The enclosure is equipped with a cooling fan which prolongs the service life of the light source

Hikrobot Style Standard Coaxial Light MV-LCDS-H Series P.48



- Special beam splitter design for higher lighting efficiency
- Provides efficient heat dissipation to extend service life

Hikrobot Style Standard Spot Light MV-LDSS-H Series P.51



- Adopts a special light guide at optical outlet to concentrate the brightness
- Compact size and efficient heat dissipation

Hikrobot Style Focused Spot Light MV-LDFS-H Series P.53



- Circular direct light with uniform illuminance in central lighting area
- High light focusing design

Hikrobot Style High-Brightness Spot Light MV-LDFM-H Series P.54



- Adopts a high focusing design with high brightness, surface illuminance (center) over 2000K lux
- Features a compact size, suitable for extremely narrow installation space

Hikrobot Style Analog Light Controller (Generic) MV-LE100-*W24-** Series P.57



- Constant voltage and stepless dimming
- Plug-and-play control panel knob

Hikrobot Style Analog Light Controller MV-LE100-*W24-**-PoE Series P.57



- Adopts industrial design and compact size, and supports installation via guide rail or screw hole.
- Supports continuous and strobe work mode switch, which flexibly controls on/off status of the light source.

Hikrobot Style Digital Light Controller (Generic) MV-LE200-*W24 Series P.60



- Flexible brightness control by control panel or software
- Device management and parameter configuration via serial ports or network interfaces

Hikrobot Style MV-LE200-*W24-*-PCIE Board Type Light Controller P.61



- Adopts PCIe × 1 interface, which is compatible to PCIe × 4/8/16 slots
- Supports pulse or analog output
- Supports external trigger and power supply via device main board

Hikrobot Style Digital Light Controller (Line-Scan Light) MV-LE201-*W48 Series P.63



- Constant current driver improves the lighting stability of light source, and the total output power can reach up to 2400 W
- Buttons and the digital display realize quick search and light path output settings

Hikrobot Style Digital Light Controller (Spot Light) MV-LE201-*W5 Series P.64



- Constant current driver improves the lighting stability of light source
- Buttons and the digital display realize quick search and light path output settings

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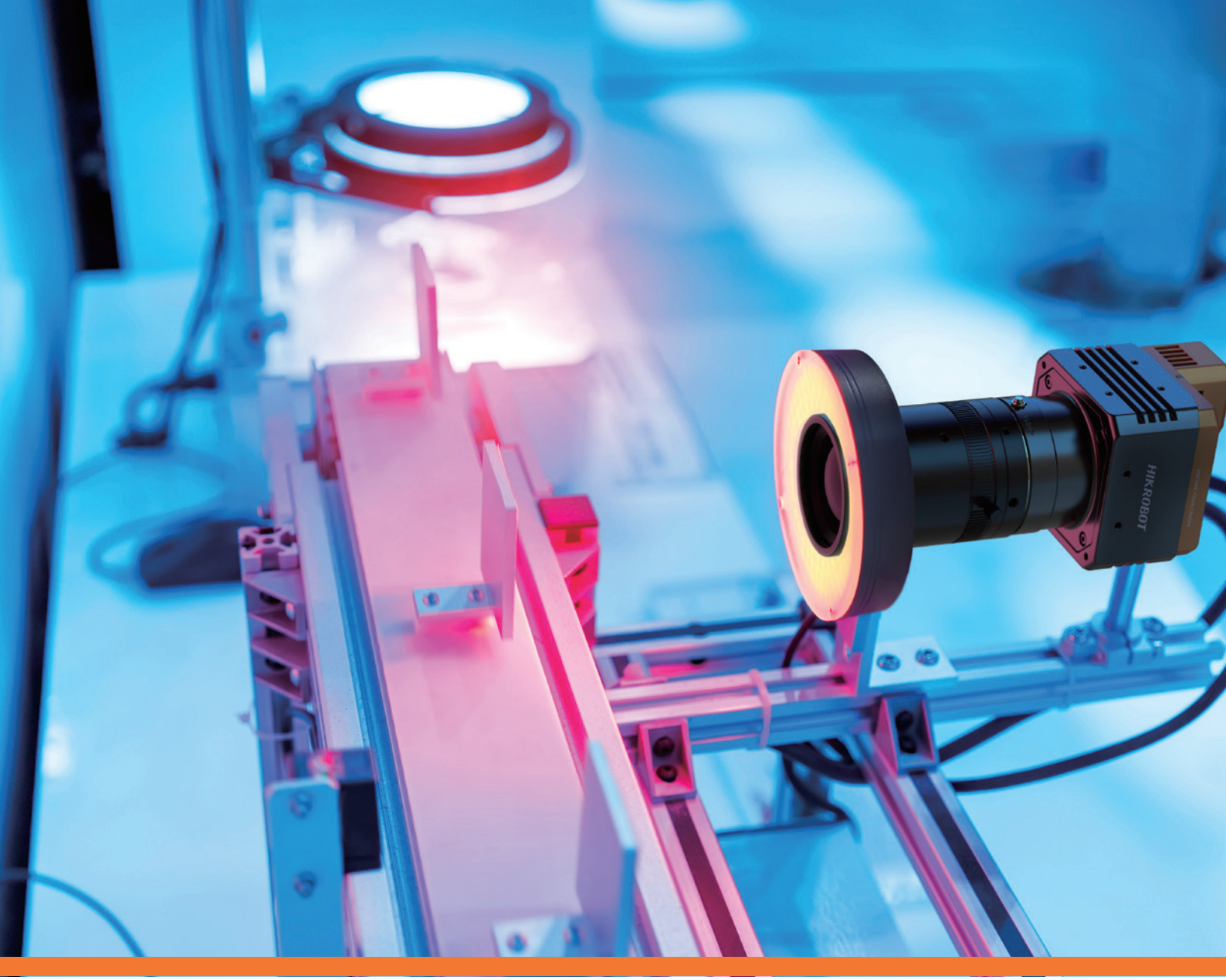
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Hikrobot

Hikrobot is a global product and solution supplier specializing in machine vision and mobile robots. Focused on IIoT, smart logistics, and smart manufacturing, we build open cooperation ecosystems, provide services to industry and logistics customers, and are committed to continuously promoting intelligentization and leading the intelligent manufacturing process.

Machine Vision

With efforts in industrial vision sensing application and hardware technology, the company provides customers with leading machine vision products. The products cover industrial camera, lens, vision box, industrial smart camera and related accessory. Through rigorous EMC, safety and reliability tests, Hikrobot guarantees the high precision, high efficiency and high environmental performance of each product. The machine vision products are widely used in industrial automation sectors such as consumer electronics, semiconductors and logistics, as a part of the vision applications like positioning guidance, measurement, quality inspection, code reading, OCR, etc. They help users to greatly improve productivity, accuracy and stability.

Overview

Light Source

Machine vision is aimed at extracting the desired image feature for subsequent operations of the vision system. Therefore, image quality is decisive to the success of the overall machine vision system. An image of ideal quality determines the speed and stability of the software algorithm, and image quality is dependent on the illumination—that is why light source is an indispensable part of a machine vision system. Based on different detection purposes and objects, we need to select different light sources and lighting methods to get the best detection result.

Role of Light Source

- Light source counteracts the influence of the ambient light and improves the contrast between the desired image feature and the background.
- Uniform light improves the detection accuracy and system stability.
- High-brightness light enhances the detection efficiency.

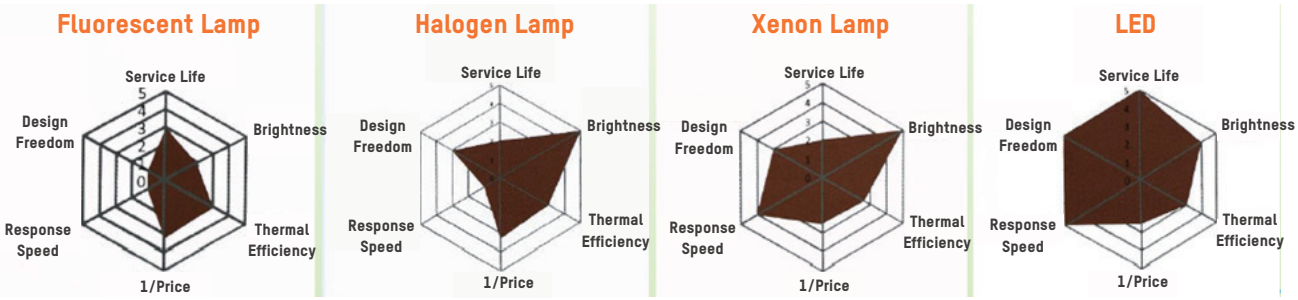
Types of Light Source

Common light source types: LED lamp, halogen lamp, fluorescent lamp, incandescent lamp.

Comprehensive comparison in terms of efficacy and lifetime:

Light source	Luminous efficacy (lm/W)	Lifetime (h)
Standard incandescent lamp	12	<2000
Energy-efficient fluorescent lamp	60	8000
High-frequency fluorescent lamp	96	10000
Halogen lamp	17-33	3000-5000
LED lamp	150	60000

Comprehensive comparison in terms of lifetime, design freedom, brightness, response speed, price, heat efficacy between fluorescent lamp, halogen lamp, xenon lamp, and LED lamp:



It can be concluded that LED lamp is superior to other light sources in efficacy, lifetime, design freedom, response speed, and price.

Therefore, LED lamp has the following advantages as a light source:

A) Various colors: Far infrared, visible light, and ultraviolet light are covered. You can choose an LED lamp of different wavelengths or colors according to different color rendering features and detection requirements of objects.

B) Quick response: The response time of a single LED is within nanoseconds.

C) Trigger and strobing: Quick response allows the lamp to reach its maximum brightness within 10 microseconds. The light can be triggered or strobe to improve light utilization or instantaneous brightness, which helps to address inadequate lighting in online shooting.

D) Flexible design: Shape, dimension, color, brightness, and irradiation angle can be set at will according to the features of the detected object. This advantage is prominent in case of limited space.

E) Prolonged lifetime: Over 30,000 hours, and longer for strobe light.

F) Cooling devices can be used for better cooling effect and more stable brightness.

G) The power can start fast because it can be triggered externally by the computer.

H) Low operation cost, low power consumption, and easy to maintain.

I) Able to be customized.

Light Source

Light controller, also referred to as light driver, is an important component in the machine vision system, and significantly influences the stability and accuracy of vision solution. It supplies power to drive all types of light sources, and controls the light source status by adjusting output voltage, current, and serial port signal. For example, in flashing capturing, strobe light controller can be used to instantaneously trigger the light source to boost the brightness by several times. Some special light sources such as line-scan light and spot light require dedicated light controllers.

Light controllers classification: Based on output signal type, there are constant voltage light controllers (CV) and constant current (CC) light controllers; based on drive mode, there are analog light controllers and digital light controllers; based on light source brightness, there are regular light controllers and light controllers supporting strobes; based on output voltage, there are low-power controllers and high-power controllers. The following section introduces the features of different light controllers.

CC and CV Light Controllers

Constant current drivers are characterized by its analog current output, with the output current maintained consistently. The key features are shown below:

(1) Adjusting brightness by buttons on the control panel and by serial ports.

(2) Integrated with overcurrent protection, overload protection, and short-circuit protection.

(3) The output signal is a pulse-free current signal, stabilizing the lighting.

(4) Low-power CC controllers are suitable for spot light and coaxial parallel light.

(5) High-power CC controllers are suitable for line scan light and high-power area scan light.

Constant voltage drivers are characterized by its consistent current output. The key features are shown below:

(1) Controlling the light source through the voltage, using standard 2, 4 or 6 channels.

(2) Adjusting brightness by buttons on the control panel and by serial ports.

(3) Integrated with overcurrent protection, overload protection, and short-circuit protection.

(4) The output signal is a pulse-free voltage signal.

(5) Suitable for low-power light sources.

Analog and Digital Light Controllers

Analog drivers implement stepless dimming by controlling the voltage, and are characterized by the following features:

(1) Simple structure and easy to operate. Using standard 2 or 4 channels, analog drivers independently control each channel to provide constant and steady voltage. Integrated with overcurrent protection and short-circuit protection.

(2) The output signal is a pulse-free voltage signal, and is in a constant status during the output.

(3) Commonly used in short-exposure high-speed camera scenes.

(4) Suitable for low-power light sources.

Digital drivers control the brightness of the light source through programs, and are characterized by the following features:

(1) Digital drivers supporting 256-level brightness adjusting can be widely applied in vision inspection systems.

(2) Using standard 2, 4, or 6 channels, digital drivers independently control each channel, and adjust brightness by the buttons on the control panel and by the serial ports.

(3) Integrated with overcurrent protection, overload protection, and short-circuit protection.

(4) The output signal is a pulse voltage signal with periodic changes, namely the PWM signal.

(5) PWM signal output allows brightness control by changing the PWM duty ratio.

(6) Quick response to triggers.

(7) Suitable for low- and medium-power light sources.

Continuous and Strobe Light Controllers

Continuous drivers can control the light source to be always on, and are characterized by the following features:

(1) The output signal is a voltage signal with continuous pulses, which can adapt to different light source models based on different power requirement.

(2) Integrated with multi-channel protection, overcurrent protection, overload protection, and short-circuit protection.

(3) Suitable for low-, medium- and high-power light sources. Light up light sources as normal.

Strobe drivers:

(1) High-performance drivers with the output pulse width within 10 μs to 999 μs, and the pulse width ratio can be customized.

(2) Supporting external trigger mode and internal trigger mode. Integrated with overcurrent protection, overload protection, and over-temperature protection.

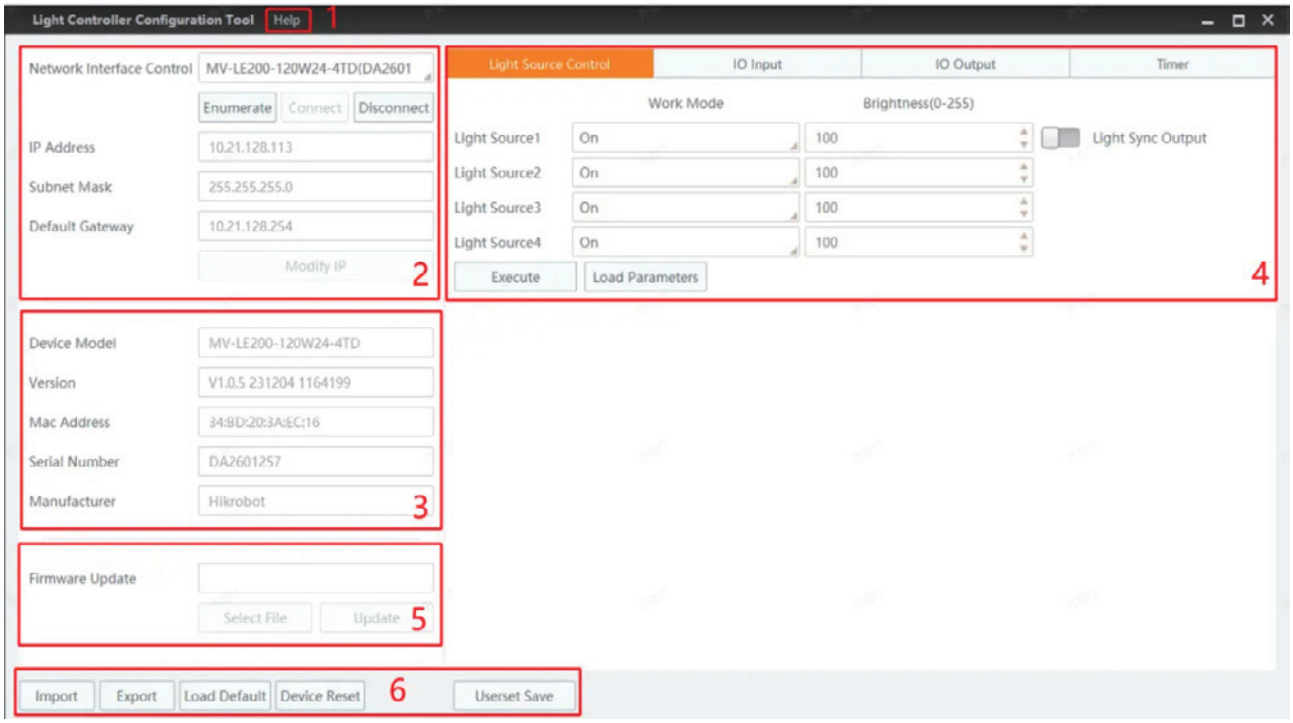
(3) The output signal is a single-pulse voltage signal.

(4) Suitable for low- and medium-power light sources. Able to improve the instantaneous brightness by over 400% and to extend the lifetime of light sources.

Software and SDK

To improve the usability of light controllers, Hikrobot has a developed light controller for better device interaction.

You can connect the demo by network interface or serial port, and configure the parameters. The picture below is the home page of the demo, and the following table introduces the functions of different modules in the page.

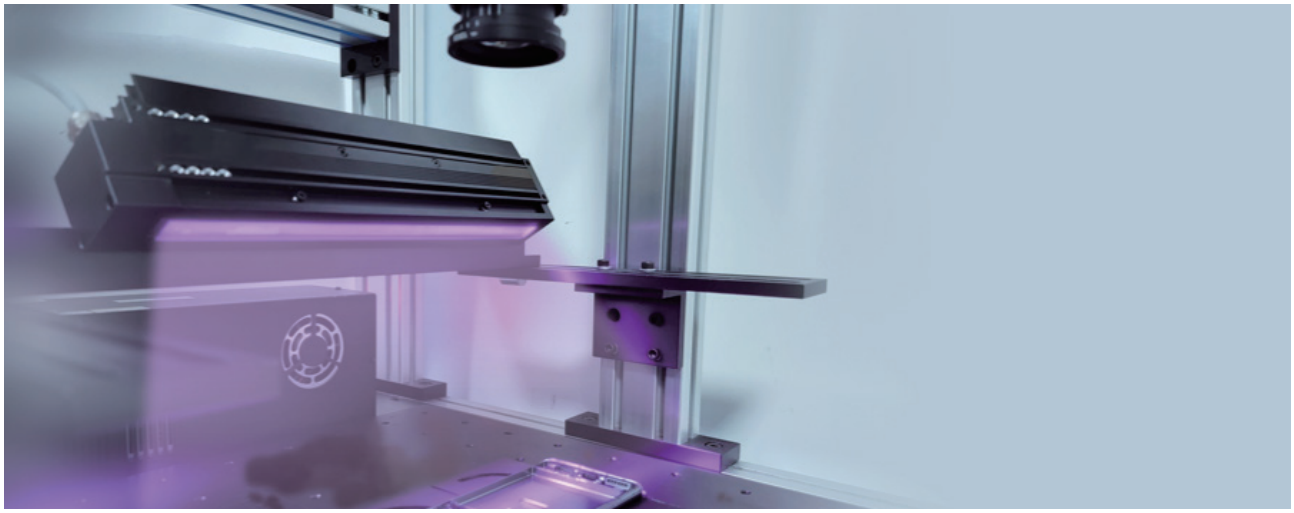


Module	Function Description
Menu Bar	Provides operational assistance. You can select language of the demo (English or Chinese) here, and view the version information of the tool.
Network interface/ Serial port management	You can choose to connect the device through the network interface or the serial port, and configure the network environment and view the device information. After connection, you can manage the device functions by setting the parameters on the right. Note: Different devices support different connecting methods. You should operate based on the situation of the specific device.
Device information	Detailed information of the device is displayed here.
Parameter configuration	You can configure the parameters of light source control, IO input, IO output, and timer here. For serial ports, you can use the serial port command line to set the device parameters.
Firmware update	Update firmware here. Before update, the device should be disconnected.
Configuration management	Import, export, reset, or save the current parameters of the device, and restart device. • Import: Import external parameter configuration to the demo. • Export: Export the current parameter configuration to the local file. • Load Default: Restore the default parameter settings. • Device Reset: Restart the device. • Userset Save: Save the current parameter settings. After saving, when you restart the device, the saved settings will be automatically loaded.

In the light source control module on the right, you can set the brightness and working mode of the light source, and acquire the current parameters of the device. This software applies to Hikrobot style light controller series.

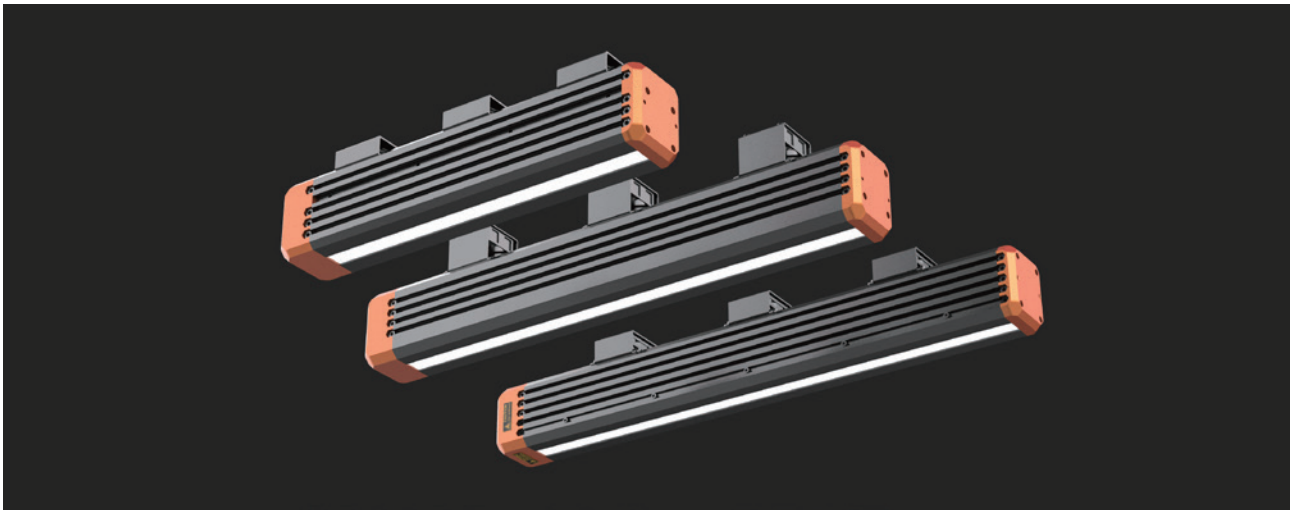
Hikrobot Style Light Source Series

Hikrobot style light source MV-*-H-* series includes MV-LRDS-H-*-W and MV-LRSS-H-*-W series ring light, MV-LLDS-H-*-*-W series bar light, MV-LTDS-H-*-W series line-scan light, etc. Featuring a brand-new family design, these light sources offer high efficiency and stability, meeting the needs of most conventional visual lighting applications.



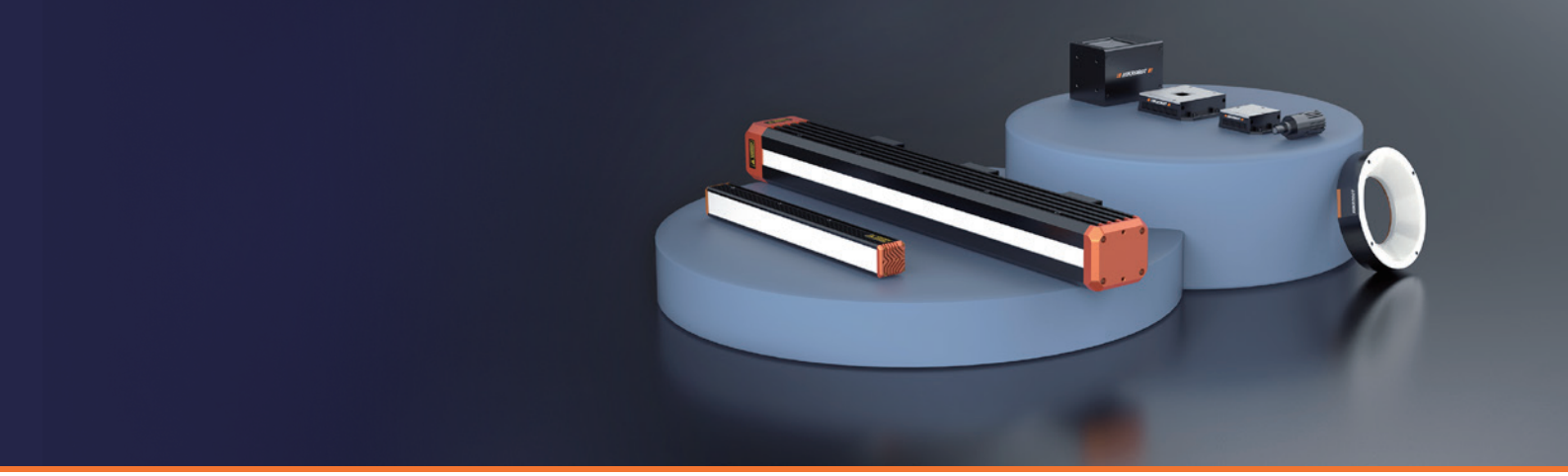
Higher brightness, better optical performance

The products in this series boast a higher color rendering index (CRI), ensuring better color reproduction. The illumination reaches up to 2000K lux, and these light sources deliver higher brightness and uniformity compared with other light sources in the same size, guaranteeing image consistency and enhancing the performance of visual lighting solutions.



Multi-size design, strong adaptability

Available in a variety of specifications, products in this seires can be adapted to diverse installation scenarios to meet the stringent and complex requirements for the lighting environment in machine vision applications.



Model Selection

Light source	Model	Dimension	Color	Illuminance	Connector type
Ring light	MV-LRDS-H	Φ45 mm to 230 mm	White	3600 lux to 66000 lux	SMR-03V-B (male)
Ring light (V2.0)	MV-LRDS-H-***-W2	Φ45 mm to 200 mm	White	4000 lux to 38000 lux	SMR-03V-B (male)
Shadowless ring light	MV-LRSS-H	Φ80 mm to 300 mm	White	8000 lux to 24000 lux	SMR-03V-B (male)
Bar light	MV-LLDS-H	64 mm to 1278 mm	Red/White/Blue	5500 lux to 31000 lux	SMR-03V-B (male), some with dual channels
			IR850/IR940	4200 μW/cm2 to 4500 μW/cm2	SMR-03V-B (male), some with dual channels
Standard flat light	MV-LBSS-H	62 mm to 428 mm	White	2700 lux to 80000 lux	SMR-03V-B (male) / 12M-2A
Flat dome light	MV-LBES-H	82 mm to 696 mm	White	7000 lux to 30000 lux	SMR-03V-B (male) / 12M-2A / Dual-channel 19M-2A
Standard coaxial light	MV-LCDS-H	69 mm to 99 mm	White/Blue/Red	1000 lux to 20000 lux	SMR-03V-B (male)
			IR850	8000 μW/cm2	SMR-03V-B (male)
Standard spot light	MV-LDSS-H	Φ24 mm	White/Blue/Red/ Green/Yellow	4000 lux to 25000 lux	SMR-03V-B (male)
Focused spot light	MV-LDFS-H	Φ29 mm	White	≥140000 lux	SMR-03V-B (male)
High-brightness spot light	MV-LDFM-H	Φ40 mm	White	500K lux	12M-5A
			IR850	160K μW/cm2	12M-5A
Line-scan light	MV-LTDS-H	150 mm to 1570mm	White	≥ 600K lux	19M-8H (male / dual-channel)
Program-controlled light	MV-LODIS-H	414 mm × 122 mm × 56.2 mm	White	> 620K lux	18M-5E

Ring Light

Hikrobot Style Ring Light MV-LRDS-H Series



Introduction

MV-LRDS-H series ring lights adopt integrated high-quality LEDs and good heat dissipation design to provide sufficient, stable, and efficient lighting. Models with various outer dimensions and irradiation angles are available.

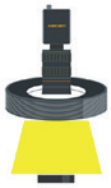
Key Features

- High-density LED array design.
- Available in models with various outer dimensions and irradiation angles.
- Adopts compact structure with good heat dissipation design.
- Provides diffuse plate to improve lighting uniformity.

Application Scenarios

- Optical character recognition.
- Color recognition.
- Printing inspection.
- Defect detection and dirt detection.

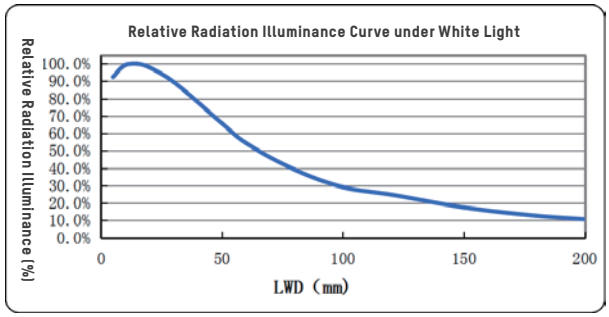
Lighting



Lighting Cases



Relative Radiation Illuminance Curve



Specification

Model	MV-LRDS-H-45-60-W2	MV-LRDS-H-45-90-W2	MV-LRDS-H-55-60-W2	MV-LRDS-H-55-90-W2
Best working distance	40 mm to 70 mm	80 mm to 90 mm	40 mm to 70 mm	80 mm to 90 mm
Irradiation angle	60°	90°	60°	90°
Dimension	Φ45 mm × 16 mm	Φ45 mm × 16 mm	Φ55 mm × 16 mm	Φ55 mm × 19 mm
Outer dimension	Φ45 mm	Φ45 mm	Φ55 mm	Φ55 mm
Bore dimension	Φ15 mm	Φ15 mm	Φ23 mm	Φ23 mm
Emitting area length	Φ37.5 mm	Φ37.5 mm	Φ47.5 mm	Φ47.5 mm
LED rows	1	2	1	2
Weight	40 g	35 g	55 g	55 g
Power	4.1 W	2.8 W	7.2 W	3.3 W

Model	MV-LRDS-H-65-0-W2	MV-LRDS-H-65-30-W2	MV-LRDS-H-65-60-W2	MV-LRDS-H-65-90-W2
Best working distance	0 mm to 10 mm	20 mm to 30 mm	60 mm to 70 mm	90 mm to 100 mm
Irradiation angle	0°	30°	60°	90°
Dimension	Φ65 mm × 15 mm	Φ65 mm × 16 mm	Φ65 mm × 16 mm	Φ65 mm × 16 mm
Outer dimension	Φ65 mm	Φ65 mm	Φ65 mm	Φ65 mm
Bore dimension	Φ35 mm	Φ30 mm	Φ30 mm	Φ30 mm
Emitting area length	Φ40 mm	Φ57.5 mm	Φ57.5 mm	Φ57.5 mm
LED rows	1	1	1	2
Weight	90 g	80 g	80 g	75 g
Power	3.5 W	9.5 W	9.5 W	4.9 W
Input voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

Model	MV-LRDS-H-73-90-W2	MV-LRDS-H-80-15-W2	MV-LRDS-H-80-30-W2	MV-LRDS-H-80-60-W2
Best working distance	60 mm to 80 mm	20 mm to 30 mm	20 mm to 30 mm	60 mm to 70 mm
Irradiation angle	90°	15°	30°	60°
Dimension	Φ73 mm × 16 mm	Φ80 mm × 16 mm	Φ80 mm × 16 mm	Φ80 mm × 16 mm
Outer dimension	Φ73 mm	Φ80 mm	Φ80 mm	Φ80 mm
Bore dimension	Φ36 mm	Φ35 mm	Φ35 mm	Φ35 mm
Emitting area length	Φ65.5 mm	Φ72 mm	Φ72 mm	Φ72 mm
LED rows	2	1	1	1
Weight	100 g	110 g	110 g	110 g
Power	6.4 W	12.9 W	12.9 W	12.9 W

Model	MV-LRDS-H-80-90-W2	MV-LRDS-H-95-0-W2	MV-LRDS-H-95-30-W2	MV-LRDS-H-95-60-W2
Best working distance	100 mm to 110 mm	0 mm to 10 mm	20 mm to 40 mm	60 mm to 100 mm
Irradiation angle	90°	0°	30°	60°
Dimension	Φ80 mm × 16 mm	Φ95 mm × 15 mm	Φ95 mm × 16 mm	Φ95 mm × 16 mm
Outer dimension	Φ80 mm	Φ95 mm	Φ95 mm	Φ95 mm
Bore dimension	Φ35 mm	Φ60 mm	Φ45 mm	Φ45 mm
Emitting area length	Φ72 mm	Φ70 mm	Φ87 mm	Φ87 mm
LED rows	3	1	2	2
Weight	115 g	140 g	160 g	160 g
Power	9.9 W	5.3 W	14.8 W	14.8 W

Model	MV-LRDS-H-95-90-W2	MV-LRDS-H-105-0-W2	MV-LRDS-H-105-15-W2	MV-LRDS-H-105-30-W2
Best working distance	90 mm to 120 mm	0 mm to 10 mm	20 mm to 30 mm	20 mm to 40 mm
Irradiation angle	90°	0°	15°	30°
Dimension	Φ95 mm × 16 mm	Φ105 mm × 16 mm	Φ105 mm × 18 mm	Φ105 mm × 18 mm
Outer dimension	Φ95 mm	Φ105 mm	Φ105 mm	Φ105 mm
Bore dimension	Φ45 mm	Φ65 mm	Φ43 mm	Φ43 mm
Emitting area length	Φ87 mm	Φ75 mm	Φ92 mm	Φ92 mm
LED rows	4	1	2	2
Weight	150 g	190 g	230 g	230 g
Power	14.5 W	6.9 W	17.3 W	17.3 W

Model	MV-LRDS-H-105-45-W2	MV-LRDS-H-105-60-W2	MV-LRDS-H-105-90-W2	MV-LRDS-H-120-0-W2
Best working distance	60 mm to 80 mm	90 mm to 120 mm	90 mm to 120 mm	0 mm to 10 mm
Irradiation angle	45°	60°	90°	0°
Dimension	Φ105 mm × 18 mm	Φ105 mm × 18 mm	Φ105 mm × 18 mm	Φ120 mm × 16 mm
Outer dimension	Φ105 mm	Φ105 mm	Φ105 mm	Φ120 mm
Bore dimension	Φ43 mm	Φ43 mm	Φ43 mm	Φ80 mm
Emitting area length	Φ92 mm	Φ92 mm	Φ92 mm	Φ90 mm
LED rows	2	2	4	1
Weight	230 g	230 g	220 g	220 g
Power	17.3 W	17.3 W	16.1 W	8.6 W

Model	MV-LRDS-H-120-30-W2	MV-LRDS-H-120-45-W2	MV-LRDS-H-120-60-W2	MV-LRDS-H-120-75-W2
Best working distance	20 mm to 40 mm	60 mm to 80 mm	90 mm to 110 mm	90 mm to 110 mm
Irradiation angle	30°	45°	60°	75°
Outer dimension	Φ120 mm	Φ120 mm	Φ120 mm	Φ120 mm
Bore dimension	Φ60 mm	Φ60 mm	Φ60 mm	Φ60 mm
Emitting area length	Φ107 mm	Φ107 mm	Φ107 mm	Φ107 mm
LED rows	2	2	2	2
Weight	285 g	285 g	285 g	285 g
Power	25.0 W	25.0 W	25.0 W	25.0 W

Model	MV-LRDS-H-120-90-W2	MV-LRDS-H-140-15-W2	MV-LRDS-H-140-45-W2	MV-LRDS-H-140-90-W2
Best working distance	90 mm to 120 mm	20 mm to 30 mm	60 mm to 80 mm	90 mm to 120 mm
Irradiation angle	90°	15°	45°	90°
Outer dimension	Φ120 mm	Φ140 mm	Φ140 mm	Φ140 mm
Bore dimension	Φ60 mm	Φ70 mm	Φ70 mm	Φ70 mm
Emitting area length	Φ107 mm	Φ127 mm	Φ127 mm	Φ127 mm
LED rows	4	2	2	5
Weight	270 g	380 g	380 g	370 g
Power	17.3 W	30.3 W	30.3 W	23.3 W

Model	MV-LRDS-H-160-0-W2	MV-LRDS-H-160-30-W2	MV-LRDS-H-160-60-W2	MV-LRDS-H-160-90-W2
Best working distance	0 mm to 10 mm	20 mm to 40 mm	70 mm to 90 mm	120 mm to 140 mm
Irradiation angle	0°	30°	60°	90°
Dimension	Φ160 mm × 16 mm	Φ160 mm × 18 mm	Φ160 mm × 18 mm	Φ160 mm × 18 mm
Outer dimension	Φ160 mm	Φ160 mm	Φ160 mm	Φ160 mm
Bore dimension	Φ120 mm	Φ90 mm	Φ90 mm	Φ90 mm
Emitting area length	Φ130 mm	Φ147 mm	Φ147 mm	Φ147 mm
LED rows	1	2	2	5
Weight	300 g	460 g	460 g	440 g
Power	10.2 W	36.4 W	36.4 W	27.5 W

Model	MV-LRDS-H-180-0-W2	MV-LRDS-H-180-15-W2	MV-LRDS-H-180-45-W2	MV-LRDS-H-180-60-W2
Best working distance	0 mm to 10 mm	20 mm to 30 mm	60 mm to 80 mm	70 mm to 90 mm
Irradiation angle	0°	15°	45°	60°
Dimension	Φ180 mm × 16 mm	Φ180 mm × 18 mm	Φ180 mm × 18 mm	Φ180 mm × 18 mm
Outer dimension	Φ180 mm	Φ180 mm	Φ180 mm	Φ180 mm
Bore dimension	Φ140 mm	Φ100 mm	Φ100 mm	Φ100 mm
Emitting area length	Φ150 mm	Φ167 mm	Φ167 mm	Φ167 mm
LED rows	1	2	2	2
Weight	340 g	570 g	570 g	570 g
Power	17.2 W	38.5 W	38.5 W	38.5 W

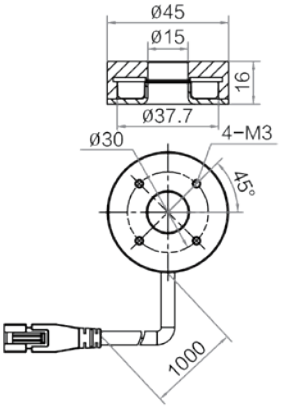
Model	MV-LRDS-H-180-75-W2	MV-LRDS-H-180-90-W2	MV-LRDS-H-200-0-W2	MV-LRDS-H-200-30-W2
Best working distance	90 mm to 110 mm	140 mm to 160 mm	0 mm to 10 mm	20 mm to 40 mm
Irradiation angle	75°	90°	0°	30°
Dimension	Φ180 mm × 18 mm	Φ180 mm × 18 mm	Φ200 mm × 16 mm	Φ200 mm × 18 mm
Outer dimension	Φ180 mm	Φ180 mm	Φ200 mm	Φ200 mm
Bore dimension	Φ100 mm	Φ100 mm	Φ160 mm	Φ115 mm
Emitting area length	Φ167 mm	Φ167 mm	Φ170 mm	Φ187 mm
LED rows	2	6	1	2
Weight	570 g	550 g	370 g	680 g
Power	38.5 W	34.3 W	20.0 W	47.5 W

Model	MV-LRDS-H-200-90-W2	MV-LRDS-H-230-15-W2	MV-LRDS-H-230-60-W2
Best working distance	180 mm to 200 mm	20 mm to 30 mm	60 mm to 100 mm
Irradiation angle	90°	15°	60°
Dimension	Φ200 mm × 18 mm	Φ230 mm × 18 mm	Φ230 mm × 18 mm
Outer dimension	Φ200 mm	Φ230 mm	Φ230 mm
Bore dimension	Φ115 mm	Φ145 mm	Φ145 mm
Emitting area length	Φ187 mm	Φ217 mm	Φ217 mm
LED rows	7	2	2
Weight	652 g	810 g	810 g
Power	33.1 W	59.9 W	60 W

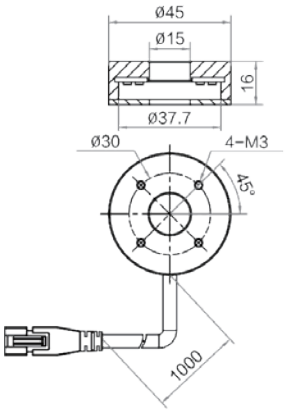
Model	MV-LRDS-H
Color	White
Color temperature	6000K to 7000K
Cable length	1 m
Cooling mode	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)
Diffuse plate included	PMMA
Input voltage	24 VDC
Connector type	SMR-03V-B

Dimension

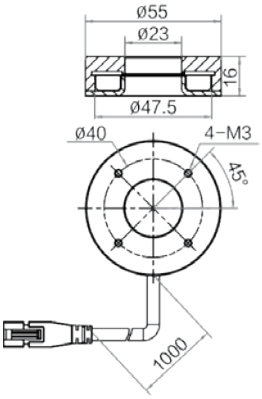
MV-LRDS-H-45-60-W2



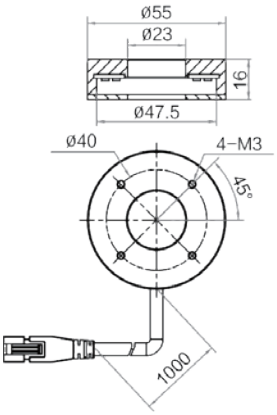
MV-LRDS-H-45-90-W2



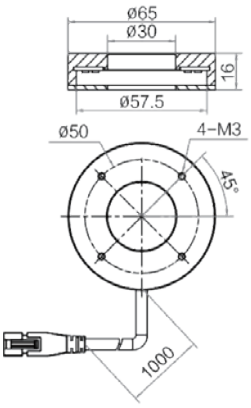
MV-LRDS-H-55-60-W2



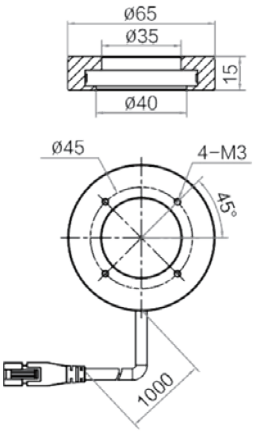
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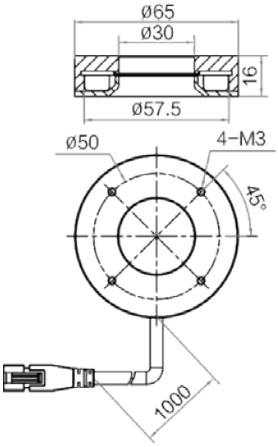
MV-LRDS-H-65-0-W2



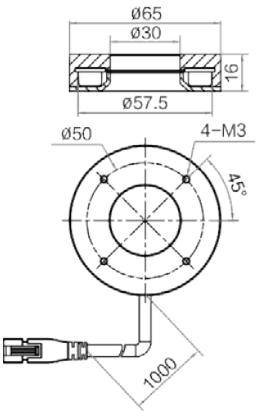
MV-LRDS-H-65-30-W2



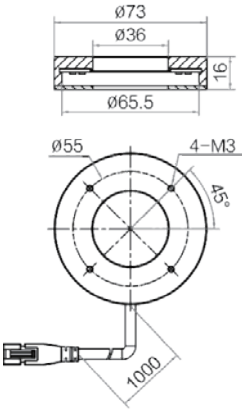
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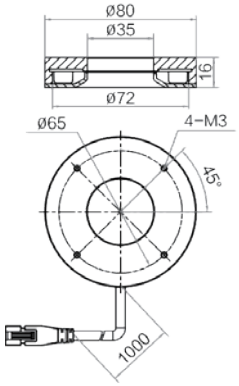
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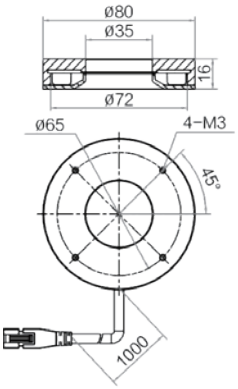
MV-LRDS-H-73-90-W2



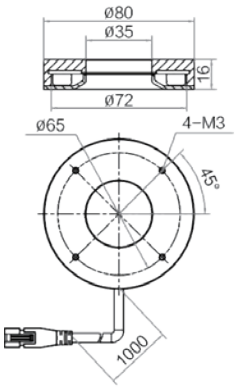
MV-LRDS-H-80-15-W2



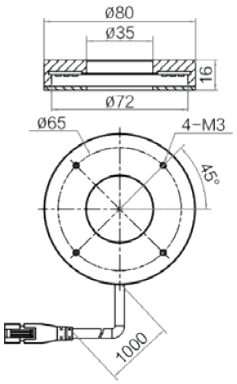
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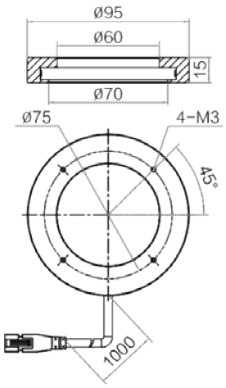
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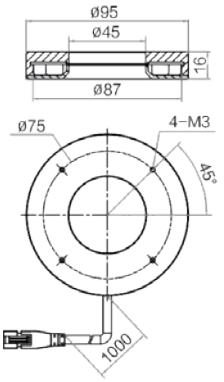
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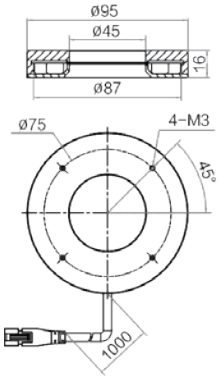
MV-LRDS-H-95-0-W2



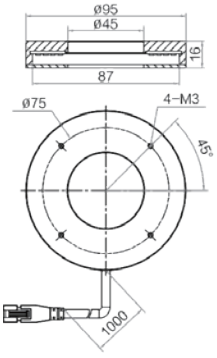
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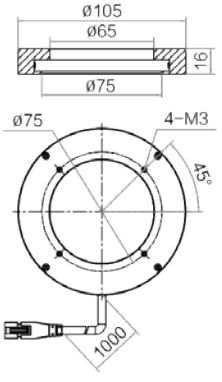
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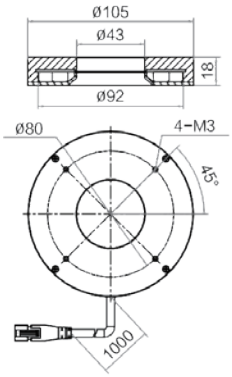
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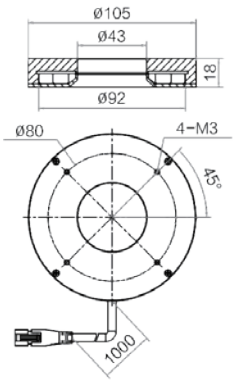
MV-LRDS-H-105-0-W2



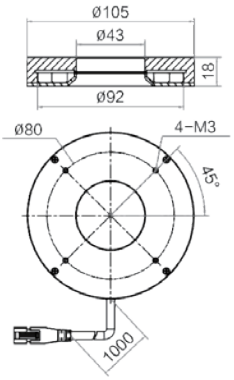
MV-LRDS-H-105-15-W2



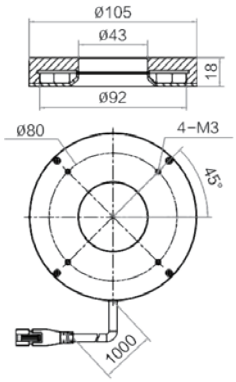
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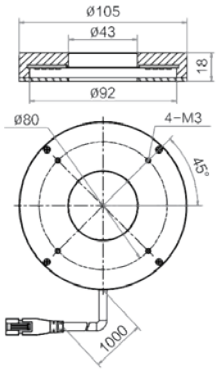
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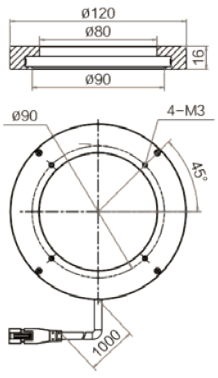
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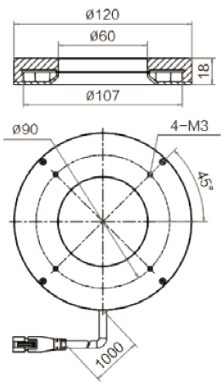
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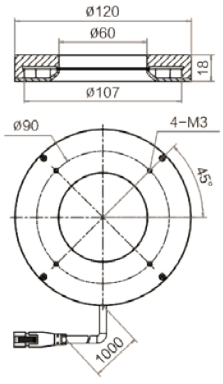
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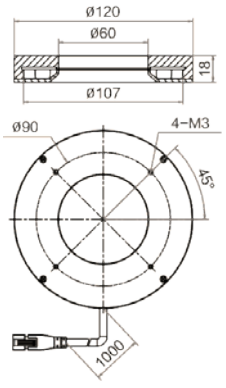
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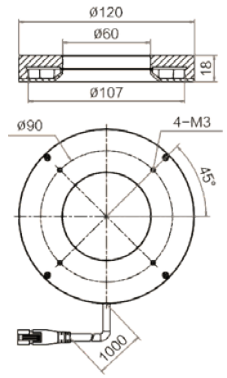
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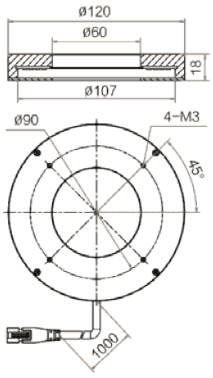
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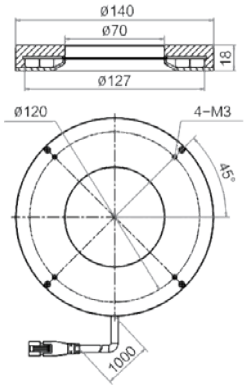
MV-LRDS-H-120-75-W2



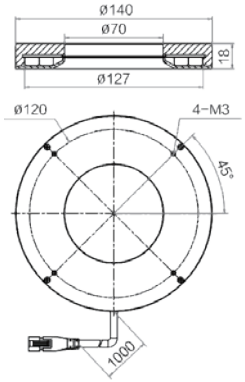
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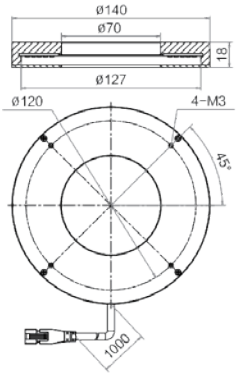
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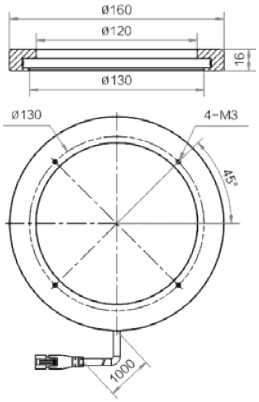
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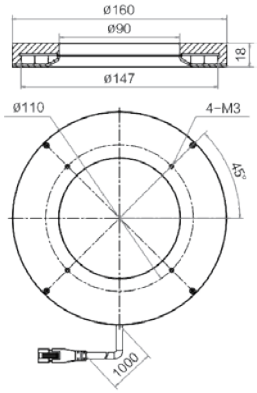
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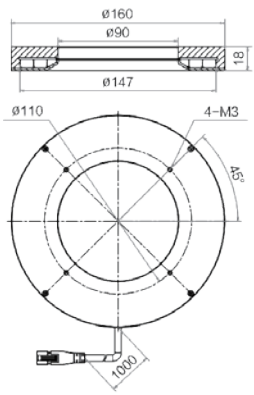
MV-LRDS-H-160-0-W2



MV-LRDS-H-160-30-W2



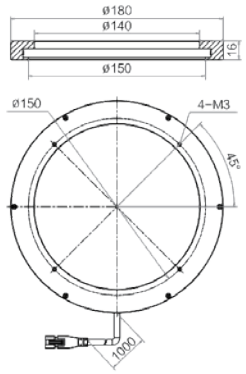
MV-LRDS-H-160-60-W2



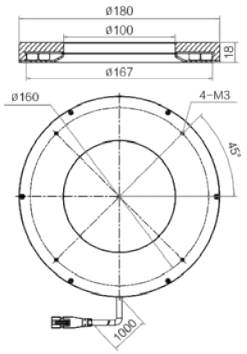
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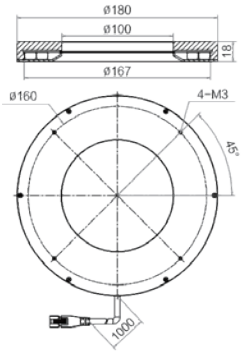
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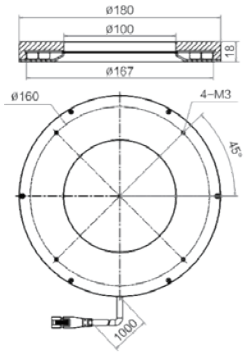
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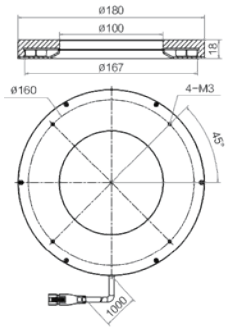
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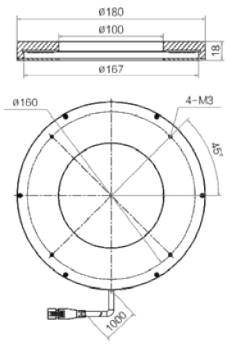
MV-LRDS-H-180-60-W2



MV-LRDS-H-180-75-W2



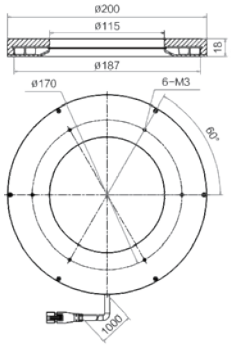
MV-LRDS-H-180-90-W2



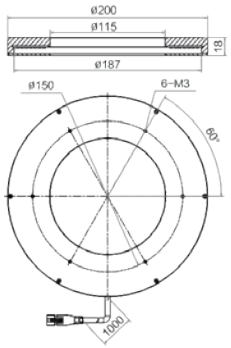
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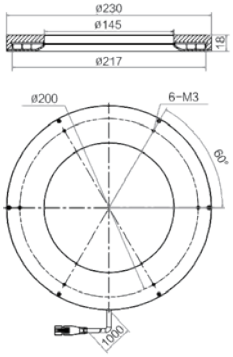
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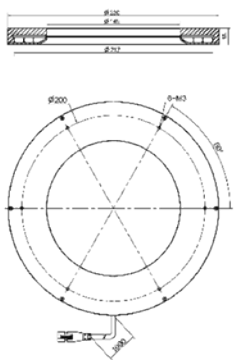
MV-LRDS-H-200-90-W2



MV-LRDS-H-230-15-W2



MV-LRDS-H-230-60-W2



Unit:mm

Hikrobot Style Shadowless Ring Light MV-LRSS-H Series

Introduction

MV-LRSS-H series shadowless ring lights adopt special diffuse plates included and integrated chip LEDs with large luminous angle to achieve uniform range irradiation with high degrees of freedom. Models with various dimensions are available.



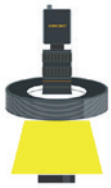
Key Features

- High lighting uniformity.
- Available in models with various outer dimensions.

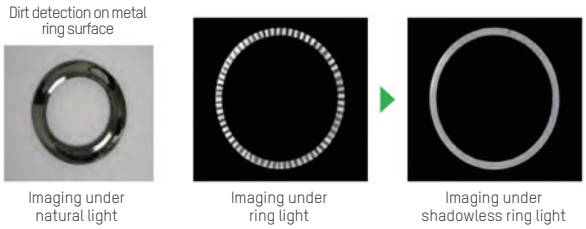
Application Scenarios

- Optical character recognition.
- Color recognition.
- Printing inspection.
- Defect detection and dirt detection.

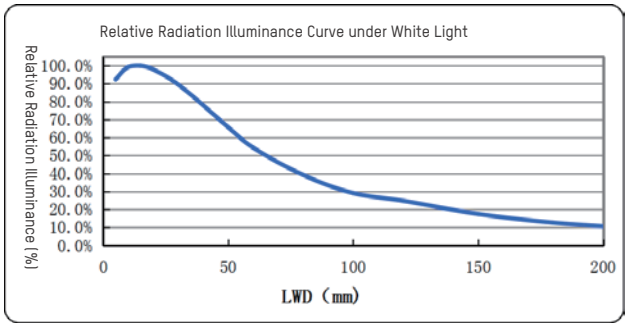
Lighting



Lighting Cases



Relative Radiation Illuminance Curve



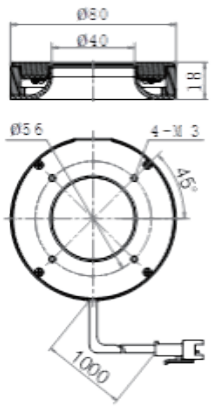
Specification

Model	MV-LRSS-H-80-W	MV-LRSS-H-120-W	MV-LRSS-H-160-W	MV-LRSS-H-200-W	MV-LRSS-H-250-W	MV-LRSS-H-300-W
Color	White	White	White	White	White	White
Color temperature	6000K to 7000K	6000K to 7000K	6000K to 7000K	6000K to 7000K	6000K to 7000K	6000K to 7000K
Best working distance	30 mm to 50 mm	30 mm to 60 mm	30 mm to 80 mm	30 mm to 80 mm	60 mm to 120 mm	60 mm to 120 mm
Dimension	Φ80 mm × 18 mm	Φ120 mm × 18 mm	Φ160 mm × 18 mm	Φ200 mm × 34 mm	Φ250 mm × 34 mm	Φ300 mm × 34 mm
Bore dimension	Φ40 mm	Φ75 mm	Φ116 mm	Φ148 mm	Φ190 mm	Φ248 mm
Emitting area length	Φ66 mm	Φ106 mm	Φ146 mm	Φ186 mm	Φ236 mm	Φ286 mm
LED rows	1	1	1	1	1	1
Weight	131 g	224 g	298 g	564 g	763 g	870 g
Cable length	1 m	1 m	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling

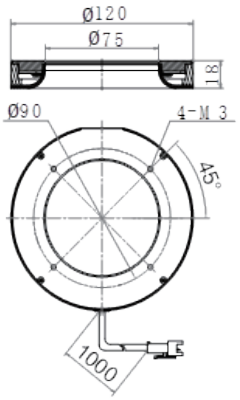
Model	MV-LRSS-H-80-W	MV-LRSS-H-120-W	MV-LRSS-H-160-W	MV-LRSS-H-200-W	MV-LRSS-H-250-W	MV-LRSS-H-300-W
Temperature	Working temperature 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: −20 °C to 60 °C (−4 °F to 140 °F)"	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: −20 °C to 60 °C (−4 °F to 140 °F)"	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: −20 °C to 60 °C (−4 °F to 140 °F)"	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: −20 °C to 60 °C (−4 °F to 140 °F)"	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: −20 °C to 60 °C (−4 °F to 140 °F)"	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: −20 °C to 60 °C (−4 °F to 140 °F)"
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	PMMA	PMMA	PMMA	PMMA	PMMA	PMMA
Power	8.7 W	13.1 W	17.4 W	21.8 W	26.2 W	30.5 W
Input voltage	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

Dimension

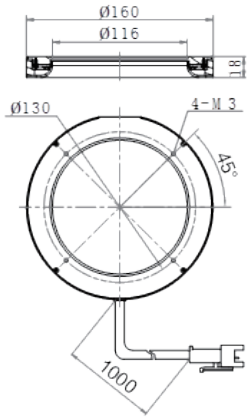
MV-LRSS-H-80-W



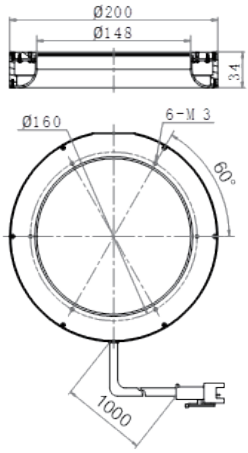
MV-LRSS-H-120-W



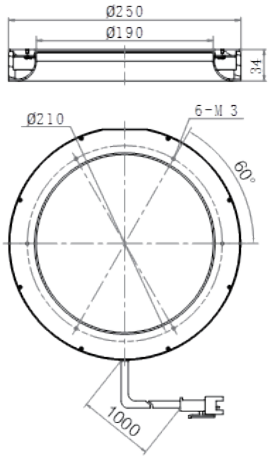
MV-LRSS-H-160-W



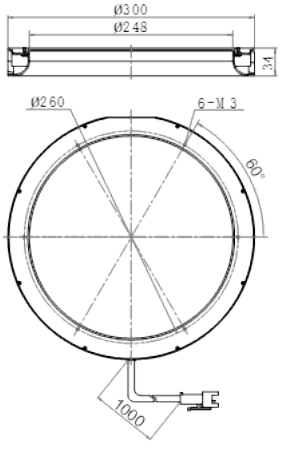
MV-LRSS-H-200-W



MV-LRSS-H-250-W



MV-LRSS-H-300-W



Unit:mm

Bar Light

Hikrobot Style Standard Bar Light MV-LLDS-H Series

Introduction

MV-LLDS-H series bar lights adopt high-quality LEDs to provide stable and sufficient lighting. Models with various length sizes are available with flexible installation.



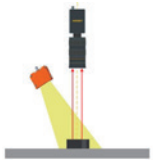
Key Features

- Adjustable irradiation direction and angle.
- Supports multi-side installation.
- High-quality LED lamp beads, stable lighting, and high brightness.

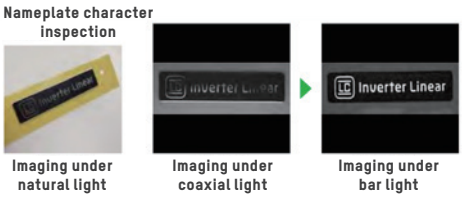
Application Scenarios

- Optical character recognition.
- Identification and detection of electronic components.
- Edge defect detection.
- Connector pin detection.

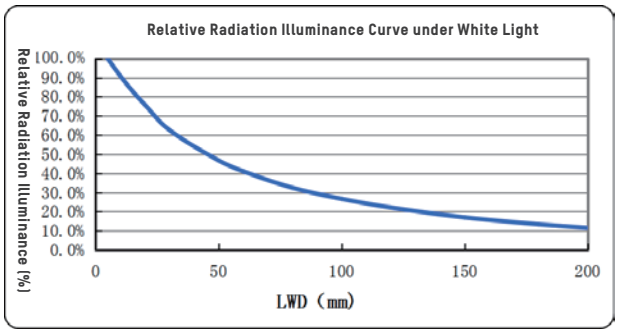
Lighting

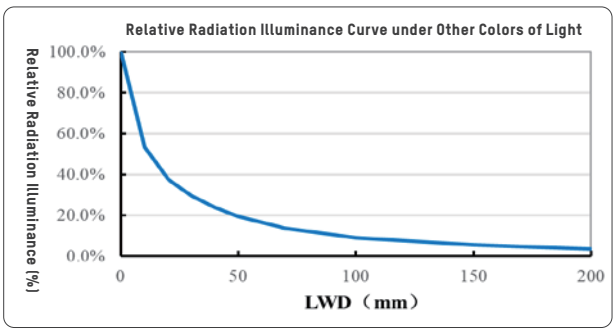


Lighting Cases



Relative Radiation Illuminance Curve





Specification

Model	MV-LLDS-H-50-30-W	MV-LLDS-H-50-30-R	MV-LLDS-H-50-30-B	MV-LLDS-H-50-30-IR850	MV-LLDS-H-50-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	63 mm × 30 mm × 30 mm	63 mm × 30 mm × 30 mm	63 mm × 30 mm × 30 mm	63 mm × 30 mm × 30 mm	63 mm × 30 mm × 30 mm
Emitting area dimension	51 mm × 21.6 mm	51 mm × 21.6 mm	51 mm × 21.6 mm	51 mm × 21.6 mm	51 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.12 kg	0.12 kg	0.12 kg	0.12 kg	0.12 kg
Power	3.4 W	1.9 W	2.6 W	2.9 W	2.9 W

Model	MV-LLDS-H-50-40-W	MV-LLDS-H-50-40-R	MV-LLDS-H-50-40-B	MV-LLDS-H-50-40-IR850	MV-LLDS-H-50-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	63 mm × 40 mm × 30 mm	63 mm × 40 mm × 30 mm	63 mm × 40 mm × 30 mm	63 mm × 40 mm × 30 mm	63 mm × 40 mm × 30 mm
Emitting area dimension	51 mm × 31.6 mm	51 mm × 31.6 mm	51 mm × 31.6 mm	51 mm × 31.6 mm	51 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.15 kg	0.15 kg	0.15 kg	0.15 kg	0.15 kg
Power	5.3 W	2.9 W	3.6 W	4.3 W	4.3 W

Model	MV-LLDS-H-100-30-W	MV-LLDS-H-100-30-R	MV-LLDS-H-100-30-B	MV-LLDS-H-100-30-IR850	MV-LLDS-H-100-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	108 mm × 30 mm × 30 mm	108 mm × 30 mm × 30 mm	108 mm × 30 mm × 30 mm	108 mm × 30 mm × 30 mm	108 mm × 30 mm × 30 mm
Emitting area dimension	96 mm × 21.6 mm	96 mm × 21.6 mm	96 mm × 21.6 mm	96 mm × 21.6 mm	96 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.2 kg	0.2 kg	0.2 kg	0.2 kg	0.2 kg
Power	6.9 W	4.1 W	5 W	5.5 W	5.8 W

Model	MV-LLDS-H-100-40-W	MV-LLDS-H-100-40-R	MV-LLDS-H-100-40-B	MV-LLDS-H-100-40-IR850	MV-LLDS-H-100-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	108 mm × 40 mm × 30 mm	108 mm × 40 mm × 30 mm	108 mm × 40 mm × 30 mm	108 mm × 40 mm × 30 mm	108 mm × 40 mm × 30 mm
Emitting area dimension	96 mm × 31.6 mm	96 mm × 31.6 mm	96 mm × 31.6 mm	96 mm × 31.6 mm	96 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.23 kg	0.23 kg	0.23 kg	0.23 kg	0.23 kg
Power	10.6 W	6 W	7.7 W	8.4 W	8.6 W

Model	MV-LLDS-H-150-30-W	MV-LLDS-H-150-30-R	MV-LLDS-H-150-30-B	MV-LLDS-H-150-30-IR850	MV-LLDS-H-150-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	153 mm × 30 mm × 30 mm	153 mm × 30 mm × 30 mm	153 mm × 30 mm × 30 mm	153 mm × 30 mm × 30 mm	153 mm × 30 mm × 30 mm
Emitting area dimension	141 mm × 21.6 mm	141 mm × 21.6 mm	141 mm × 21.6 mm	141 mm × 21.6 mm	141 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.28 kg	0.28 kg	0.28 kg	0.28 kg	0.28 kg
Power	10 W	6 W	7.7 W	8.4 W	8.6 W

Model	MV-LLDS-H-150-40-W	MV-LLDS-H-150-40-R	MV-LLDS-H-150-40-B	MV-LLDS-H-150-40-IR850	MV-LLDS-H-150-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	153 mm × 40 mm × 30 mm	153 mm × 40 mm × 30 mm	153 mm × 40 mm × 30 mm	153 mm × 40 mm × 30 mm	153 mm × 40 mm × 30 mm
Emitting area dimension	141 mm × 31.6 mm	141 mm × 31.6 mm	141 mm × 31.6 mm	141 mm × 31.6 mm	141 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.32 kg	0.32 kg	0.32 kg	0.32 kg	0.32 kg
Power	15.7 W	8.9 W	11.3 W	12.7 W	13 W

Model	MV-LLDS-H-200-30-W	MV-LLDS-H-200-30-R	MV-LLDS-H-200-30-B	MV-LLDS-H-200-30-IR850	MV-LLDS-H-200-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	198 mm × 30 mm × 30 mm	198 mm × 30 mm × 30 mm	198 mm × 30 mm × 30 mm	198 mm × 30 mm × 30 mm	198 mm × 30 mm × 30 mm
Emitting area dimension	186 mm × 21.6 mm	186 mm × 21.6 mm	186 mm × 21.6 mm	186 mm × 21.6 mm	186 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.36 kg	0.36 kg	0.36 kg	0.36 kg	0.36 kg
Power	13.5 W	6 W	10.3 W	11.3 W	11.5 W

Model	MV-LLDS-H-200-40-W	MV-LLDS-H-200-40-R	MV-LLDS-H-200-40-B	MV-LLDS-H-200-40-IR850	MV-LLDS-H-200-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	198 mm × 40 mm × 30 mm	198 mm × 40 mm × 30 mm	198 mm × 40 mm × 30 mm	198 mm × 40 mm × 30 mm	198 mm × 40 mm × 30 mm
Emitting area dimension	186 mm × 31.6 mm	186 mm × 31.6 mm	186 mm × 31.6 mm	186 mm × 31.6 mm	186 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.41 kg	0.41 kg	0.41 kg	0.41 kg	0.41 kg
Power	20.9 W	12 W	15.4 W	16.8 W	17.3 W

Model	MV-LLDS-H-250-30-W	MV-LLDS-H-250-30-R	MV-LLDS-H-250-30-B	MV-LLDS-H-250-30-IR850	MV-LLDS-H-250-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	243 mm × 30 mm × 30 mm	243 mm × 30 mm × 30 mm	243 mm × 30 mm × 30 mm	243 mm × 30 mm × 30 mm	243 mm × 30 mm × 30 mm
Emitting area dimension	231 mm × 21.6 mm	231 mm × 21.6 mm	231 mm × 21.6 mm	231 mm × 21.6 mm	231 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.43 kg	0.43 kg	0.43 kg	0.43 kg	0.43 kg
Power	16.9 W	9.8 W	12.7 W	14.2 W	14.4 W

Model	MV-LLDS-H-250-40-W	MV-LLDS-H-250-40-R	MV-LLDS-H-250-40-B	MV-LLDS-H-250-40-IR850	MV-LLDS-H-250-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	243 mm × 40 mm × 30 mm	243 mm × 40 mm × 30 mm	243 mm × 40 mm × 30 mm	243 mm × 40 mm × 30 mm	243 mm × 40 mm × 30 mm
Emitting area dimension	231 mm × 31.6 mm	231 mm × 31.6 mm	231 mm × 31.6 mm	231 mm × 31.6 mm	231 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.49 kg	0.49 kg	0.49 kg	0.49 kg	0.49 kg
Power	26.2 W	14.9 W	19 W	21.1 W	21.6 W

Model	MV-LLDS-H-300-30-W	MV-LLDS-H-300-30-R	MV-LLDS-H-300-30-B	MV-LLDS-H-300-30-IR850	MV-LLDS-H-300-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	288 mm × 30 mm × 30 mm	288 mm × 30 mm × 30 mm	288 mm × 30 mm × 30 mm	288 mm × 30 mm × 30 mm	288 mm × 30 mm × 30 mm
Emitting area dimension	276 mm × 21.6 mm	276 mm × 21.6 mm	276 mm × 21.6 mm	276 mm × 21.6 mm	276 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.51 kg	0.51 kg	0.51 kg	0.51 kg	0.51 kg
Power	20.1 W	12 W	15.4 W	16.8 W	17.3 W

Model	MV-LLDS-H-300-40-W	MV-LLDS-H-300-40-R	MV-LLDS-H-300-40-B	MV-LLDS-H-300-40-IR850	MV-LLDS-H-300-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	288 mm × 40 mm × 30 mm	288 mm × 40 mm × 30 mm	288 mm × 40 mm × 30 mm	288 mm × 40 mm × 30 mm	288 mm × 40 mm × 30 mm
Emitting area dimension	276 mm × 31.6 mm	276 mm × 31.6 mm	276 mm × 31.6 mm	276 mm × 31.6 mm	276 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.57 kg	0.57 kg	0.57 kg	0.57 kg	0.57 kg
Power	31.3 W	18 W	23 W	25.4 W	25.7 W

Model	MV-LLDS-H-350-30-W	MV-LLDS-H-350-30-R	MV-LLDS-H-350-30-B	MV-LLDS-H-350-30-IR850	MV-LLDS-H-350-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	333 mm × 30 mm × 30 mm	333 mm × 30 mm × 30 mm	333 mm × 30 mm × 30 mm	333 mm × 30 mm × 30 mm	333 mm × 30 mm × 30 mm
Emitting area dimension	321 mm × 21.6 mm	321 mm × 21.6 mm	321 mm × 21.6 mm	321 mm × 21.6 mm	321 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.59 kg	0.59 kg	0.59 kg	0.59 kg	0.59 kg
Power	23.5 W	13.9 W	17.8 W	19.7 W	20.2 W

Model	MV-LLDS-H-350-40-W	MV-LLDS-H-350-40-R	MV-LLDS-H-350-40-B	MV-LLDS-H-350-40-IR850	MV-LLDS-H-350-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	333 mm × 40 mm × 30 mm	333 mm × 40 mm × 30 mm	333 mm × 40 mm × 30 mm	333 mm × 40 mm × 30 mm	333 mm × 40 mm × 30 mm
Emitting area dimension	321 mm × 31.6 mm	321 mm × 31.6 mm	321 mm × 31.6 mm	321 mm × 31.6 mm	321 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.66 kg	0.66 kg	0.66 kg	0.66 kg	0.66 kg
Power	36.6 W	20.9 W	26.6 W	29.5 W	30 W

Model	MV-LLDS-H-400-30-W	MV-LLDS-H-400-30-R	MV-LLDS-H-400-30-B	MV-LLDS-H-400-30-IR850	MV-LLDS-H-400-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	378 mm × 30 mm × 30 mm	378 mm × 30 mm × 30 mm	378 mm × 30 mm × 30 mm	378 mm × 30 mm × 30 mm	378 mm × 30 mm × 30 mm
Emitting area dimension	366 mm × 21.6 mm	366 mm × 21.6 mm	366 mm × 21.6 mm	366 mm × 21.6 mm	366 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.67 kg	0.67 kg	0.67 kg	0.67 kg	0.67 kg
Power	26.9 W	15.8 W	20.4 W	22.6 W	22.8 W

Model	MV-LLDS-H-400-40-W	MV-LLDS-H-400-40-R	MV-LLDS-H-400-40-B	MV-LLDS-H-400-40-IR850	MV-LLDS-H-400-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	378 mm × 40 mm × 30 mm	378 mm × 40 mm × 30 mm	378 mm × 40 mm × 30 mm	378 mm × 40 mm × 30 mm	378 mm × 40 mm × 30 mm
Emitting area dimension	366 mm × 31.6 mm	366 mm × 31.6 mm	366 mm × 31.6 mm	366 mm × 31.6 mm	366 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.74 kg	0.74 kg	0.74 kg	0.74 kg	0.74 kg
Power	41.9 W	23.8 W	30.7 W	33.8 W	34.3 W

Model	MV-LLDS-H-450-30-W	MV-LLDS-H-450-30-R	MV-LLDS-H-450-30-B	MV-LLDS-H-450-30-IR850	MV-LLDS-H-450-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	423 mm × 30 mm × 30 mm	423 mm × 30 mm × 30 mm	423 mm × 30 mm × 30 mm	423 mm × 30 mm × 30 mm	423 mm × 30 mm × 30 mm
Emitting area dimension	411 mm × 21.6 mm	411 mm × 21.6 mm	411 mm × 21.6 mm	411 mm × 21.6 mm	411 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.75 kg	0.75 kg	0.75 kg	0.75 kg	0.75 kg
Power	30.1 W	18 W	23 W	25.4 W	25.7 W

Model	MV-LLDS-H-450-40-W	MV-LLDS-H-450-40-R	MV-LLDS-H-450-40-B	MV-LLDS-H-450-40-IR850	MV-LLDS-H-450-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	423 mm × 40 mm × 30 mm	423 mm × 40 mm × 30 mm	423 mm × 40 mm × 30 mm	423 mm × 40 mm × 30 mm	423 mm × 40 mm × 30 mm
Emitting area dimension	411 mm × 31.6 mm	411 mm × 31.6 mm	411 mm × 31.6 mm	411 mm × 31.6 mm	411 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.83 kg	0.83 kg	0.83 kg	0.83 kg	0.83 kg
Power	47 W	26.9 W	34.3 W	37.9 W	38.6 W

Model	MV-LLDS-H-500-30-W	MV-LLDS-H-500-30-R	MV-LLDS-H-500-30-B	MV-LLDS-H-500-30-IR850	MV-LLDS-H-500-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	468 mm × 30 mm × 30 mm	468 mm × 30 mm × 30 mm	468 mm × 30 mm × 30 mm	468 mm × 30 mm × 30 mm	468 mm × 30 mm × 30 mm
Emitting area dimension	456 mm × 21.6 mm	456 mm × 21.6 mm	456 mm × 21.6 mm	456 mm × 21.6 mm	456 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.83 kg	0.83 kg	0.83 kg	0.83 kg	0.83 kg
Power	33.5 W	19.9 W	25.4 W	28.1 W	28.6 W

Model	MV-LLDS-H-500-40-W	MV-LLDS-H-500-40-R	MV-LLDS-H-500-40-B	MV-LLDS-H-500-40-IR850	MV-LLDS-H-500-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	468 mm × 40 mm × 30 mm	468 mm × 40 mm × 30 mm	468 mm × 40 mm × 30 mm	468 mm × 40 mm × 30 mm	468 mm × 40 mm × 30 mm
Emitting area dimension	456 mm × 31.6 mm	456 mm × 31.6 mm	456 mm × 31.6 mm	456 mm × 31.6 mm	456 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	0.91 kg	0.91 kg	0.91 kg	0.91 kg	0.91 kg
Power	52.2 W	29.8 W	38.4 W	42.2 W	43 W

Model	MV-LLDS-H-600-30-W	MV-LLDS-H-600-30-R	MV-LLDS-H-600-30-B	MV-LLDS-H-600-30-IR850	MV-LLDS-H-600-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	558 mm × 30 mm × 30 mm	558 mm × 30 mm × 30 mm	558 mm × 30 mm × 30 mm	558 mm × 30 mm × 30 mm	558 mm × 30 mm × 30 mm
Emitting area dimension	546 mm × 21.6 mm	546 mm × 21.6 mm	546 mm × 21.6 mm	546 mm × 21.6 mm	546 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	0.98 kg	0.98 kg	0.98 kg	0.98 kg	0.98 kg
Power	40.1 W	23.8 W	30.7 W	33.8 W	34.3 W

Model	MV-LLDS-H-600-40-W	MV-LLDS-H-600-40-R	MV-LLDS-H-600-40-B	MV-LLDS-H-600-40-IR850	MV-LLDS-H-600-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	558 mm × 40 mm × 30 mm	558 mm × 40 mm × 30 mm	558 mm × 40 mm × 30 mm	558 mm × 40 mm × 30 mm	558 mm × 40 mm × 30 mm
Emitting area dimension	546 mm × 31.6 mm	546 mm × 31.6 mm	546 mm × 31.6 mm	546 mm × 31.6 mm	546 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	1.08 kg	1.08 kg	1.08 kg	1.08 kg	1.08 kg
Power	62.6 W	35.8 W	45.6 W	50.6 W	51.6 W

Model	MV-LLDS-H-700-30-W	MV-LLDS-H-700-30-R	MV-LLDS-H-700-30-B	MV-LLDS-H-700-30-IR850	MV-LLDS-H-700-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	648 mm × 30 mm × 30 mm	648 mm × 30 mm × 30 mm	648 mm × 30 mm × 30 mm	648 mm × 30 mm × 30 mm	648 mm × 30 mm × 30 mm
Emitting area dimension	636 mm × 21.6 mm	636 mm × 21.6 mm	636 mm × 21.6 mm	636 mm × 21.6 mm	636 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	1.14 kg	1.14 kg	1.14 kg	1.14 kg	1.14 kg
Power	47 W	27.8 W	35.8 W	39.4 W	40.1 W

Model	MV-LLDS-H-700-40-W	MV-LLDS-H-700-40-R	MV-LLDS-H-700-40-B	MV-LLDS-H-700-40-IR850	MV-LLDS-H-700-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	648 mm × 40 mm × 30 mm	648 mm × 40 mm × 30 mm	648 mm × 40 mm × 30 mm	648 mm × 40 mm × 30 mm	648 mm × 40 mm × 30 mm
Emitting area dimension	636 mm × 31.6 mm	636 mm × 31.6 mm	636 mm × 31.6 mm	636 mm × 31.6 mm	636 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	1.26 kg	1.26 kg	1.26 kg	1.26 kg	1.26 kg
Power	73.2 W	41.8 W	53.3 W	59 W	60.2 W

Model	MV-LLDS-H-800-30-W	MV-LLDS-H-800-30-R	MV-LLDS-H-800-30-B	MV-LLDS-H-800-30-IR940	MV-LLDS-H-800-40-W
Color	White	Red	Blue	IR940	White
Dimension	738 mm × 30 mm × 30 mm	738 mm × 30 mm × 30 mm	738 mm × 30 mm × 30 mm	738 mm × 30 mm × 30 mm	738 mm × 40 mm × 30 mm
Emitting area dimension	726 mm × 21.6 mm	726 mm × 21.6 mm	726 mm × 21.6 mm	726 mm × 21.6 mm	726 mm × 31.6 mm
LED rows	4	4	4	4	6
Weight	1.29 kg	1.29 kg	1.29 kg	1.29 kg	1.43 kg
Power	53.6 W	31.9 W	40.6 W	45.8 W	70.9 W

Model	MV-LLDS-H-800-40-R	MV-LLDS-H-800-40-B	MV-LLDS-H-800-40-IR850	MV-LLDS-H-800-40-IR940	MV-LLDS-H-900-30-W
Color	Red	Blue	IR850	IR940	White
Dimension	738 mm × 40 mm × 30 mm	738 mm × 40 mm × 30 mm	738 mm × 40 mm × 30 mm	738 mm × 40 mm × 30 mm	828 mm × 30 mm × 30 mm
Emitting area dimension	726 mm × 31.6 mm	726 mm × 31.6 mm	726 mm × 31.6 mm	726 mm × 31.6 mm	816 mm × 21.6 mm
LED rows	6	6	6	6	4
Weight	1.43 kg	1.43 kg	1.43 kg	1.43 kg	1.45 kg
Power	47.8 W	61.0 W	67.7 W	68.6 W	60.2 W

Model	MV-LLDS-H-900-30-R	MV-LLDS-H-900-30-B	MV-LLDS-H-900-30-IR850	MV-LLDS-H-900-30-IR940	MV-LLDS-H-900-40-W
Color	Red	Blue	IR850	IR940	White
Dimension	828 mm × 30 mm × 30 mm	828 mm × 30 mm × 30 mm	828 mm × 30 mm × 30 mm	828 mm × 30 mm × 30 mm	828 mm × 40 mm × 30 mm
Emitting area dimension	816 mm × 21.6 mm	816 mm × 21.6 mm	816 mm × 21.6 mm	816 mm × 21.6 mm	816 mm × 31.6 mm
LED rows	4	4	4	4	6
Weight	1.45 kg	1.45 kg	1.45 kg	1.45 kg	1.6 kg
Power	35.8 W	45.6 W	50.6 W	51.6 W	93.9 W

Model	MV-LLDS-H-900-40-R	MV-LLDS-H-900-40-B	MV-LLDS-H-900-40-IR850	MV-LLDS-H-900-40-IR940	MV-LLDS-H-1000-30-W
Color	Red	Blue	IR850	IR940	White
Dimension	828 mm × 40 mm × 30 mm	828 mm × 40 mm × 30 mm	828 mm × 40 mm × 30 mm	828 mm × 40 mm × 30 mm	918 mm × 30 mm × 30 mm
Emitting area dimension	816 mm × 31.6 mm	816 mm × 31.6 mm	816 mm × 31.6 mm	816 mm × 31.6 mm	906 mm × 21.6 mm
LED rows	6	6	6	6	4
Weight	1.6 kg	1.6 kg	1.6 kg	1.6 kg	1.61 kg
Power	53.8 W	68.6 W	76.1 W	77.3 W	67.1 W

Model	MV-LLDS-H-1000-30-R	MV-LLDS-H-1000-30-B	MV-LLDS-H-1000-30-IR850	MV-LLDS-H-1000-30-IR940	MV-LLDS-H-1000-40-W
Color	Red	Blue	IR850	IR940	White
Dimension	918 mm × 30 mm × 30 mm	918 mm × 30 mm × 30 mm	918 mm × 30 mm × 30 mm	918 mm × 30 mm × 30 mm	918 mm × 40 mm × 30 mm
Emitting area dimension	906 mm × 21.6 mm	906 mm × 21.6 mm	906 mm × 21.6 mm	906 mm × 21.6 mm	906 mm × 31.6 mm
LED rows	4	4	4	4	6
Weight	1.61 kg	1.61 kg	1.61 kg	1.61 kg	1.77 kg
Power	39.8 W	50.9 W	56.4 W	57.4 W	104.5 W

Model	MV-LLDS-H-1000-40-R	MV-LLDS-H-1000-40-B	MV-LLDS-H-1000-40-IR850	MV-LLDS-H-1000-40-IR940	MV-LLDS-H-1200-30-W
Color	Red	Blue	IR850	IR940	White
Dimension	918 mm × 40 mm × 30 mm	918 mm × 40 mm × 30 mm	918 mm × 40 mm × 30 mm	918 mm × 40 mm × 30 mm	1098 mm × 30 mm × 30 mm
Emitting area dimension	906 mm × 31.6 mm	906 mm × 31.6 mm	906 mm × 31.6 mm	906 mm × 31.6 mm	1086 mm × 21.6 mm
LED rows	6	6	6	6	4
Weight	1.77 kg	1.77 kg	1.77 kg	1.77 kg	1.92 kg
Power	59.5 W	76.3 W	84.5 W	85.9 W	80.3 W

Model	MV-LLDS-H-1200-30-R	MV-LLDS-H-1200-30-B	MV-LLDS-H-1200-30-IR850	MV-LLDS-H-1200-30-IR940	MV-LLDS-H-1200-40-W
Color	Red	Blue	IR850	IR940	White
Dimension	1098 mm × 30 mm × 30 mm	1098 mm × 30 mm × 30 mm	1098 mm × 30 mm × 30 mm	1098 mm × 30 mm × 30 mm	1098 mm × 40 mm × 30 mm
Emitting area dimension	1086 mm × 21.6 mm	1086 mm × 21.6 mm	1086 mm × 21.6 mm	1086 mm × 21.6 mm	1086 mm × 31.6 mm
LED rows	4	4	4	4	6
Weight	1.92 kg	1.92 kg	1.92 kg	1.92 kg	2.11 kg
Power	47.8 W	61 W	67.7 W	68.6 W	116.4 W

Model	MV-LLDS-H-1200-40-R	MV-LLDS-H-1200-40-B	MV-LLDS-H-1200-40-IR850	MV-LLDS-H-1200-40-IR940	MV-LLDS-H-1300-40-W
Color	Red	Blue	IR850	IR940	White
Dimension	1098 mm × 40 mm × 30 mm	1098 mm × 40 mm × 30 mm	1098 mm × 40 mm × 30 mm	1098 mm × 40 mm × 30 mm	1188 mm × 40 mm × 30 mm
Emitting area dimension	1086 mm × 31.6 mm	1086 mm × 31.6 mm	1086 mm × 31.6 mm	1086 mm × 31.6 mm	1172.6 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	2.11 kg	2.11 kg	2.11 kg	2.11 kg	2 kg
Power	71.5 W	91.7 W	101.3 W	103.2 W	116 W

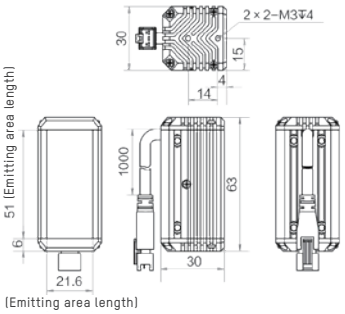
Model	MV-LLDS-H-1400-30-W	MV-LLDS-H-1400-30-R	MV-LLDS-H-1400-30-B	MV-LLDS-H-1400-30-IR850	MV-LLDS-H-1400-30-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	1278 mm × 30 mm × 30 mm	1278 mm × 30 mm × 30 mm	1278 mm × 30 mm × 30 mm	1278 mm × 30 mm × 30 mm	1278 mm × 30 mm × 30 mm
Emitting area dimension	1266 mm × 21.6 mm	1266 mm × 21.6 mm	1266 mm × 21.6 mm	1266 mm × 21.6 mm	1266 mm × 21.6 mm
LED rows	4	4	4	4	4
Weight	2.23 kg	2.23 kg	2.23 kg	2.23 kg	2.23 kg
Power	93.7 W	47.8 W	71.3 W	79 W	80.2 W

Model	MV-LLDS-H-1400-40-W	MV-LLDS-H-1400-40-R	MV-LLDS-H-1400-40-B	MV-LLDS-H-1400-40-IR850	MV-LLDS-H-1400-40-IR940
Color	White	Red	Blue	IR850	IR940
Dimension	1278 mm × 40 mm × 30 mm	1278 mm × 40 mm × 30 mm	1278 mm × 40 mm × 30 mm	1278 mm × 40 mm × 30 mm	1278 mm × 40 mm × 30 mm
Emitting area dimension	1266 mm × 31.6 mm	1266 mm × 31.6 mm	1266 mm × 31.6 mm	1266 mm × 31.6 mm	1266 mm × 31.6 mm
LED rows	6	6	6	6	6
Weight	2.45 kg	2.45 kg	2.45 kg	2.45 kg	2.45 kg
Power	116.5 W	83.5 W	107 W	118.3 W	120 W

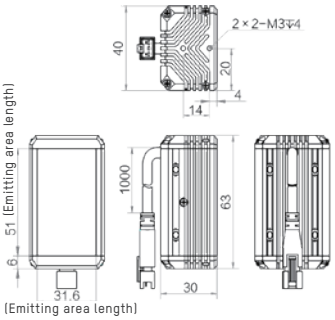
MV-LLDS-H	
Best working distance	30 mm to 500 mm
Wavelength	R: 625 nm B: 465 nm IR850: 850 nm IR940: 940 nm UV365: 365 nm
Color temperature	W: 6000 ~ 7500K
Cable length	1 m
Cooling mode	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)
Diffuse plate included	PMMA
Input voltage	24 VDC
Connector type	SMR-03V-B

Dimension

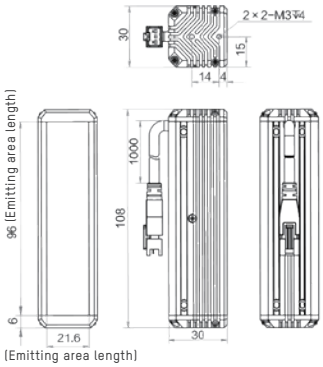
MV-LLDS-H-50-30



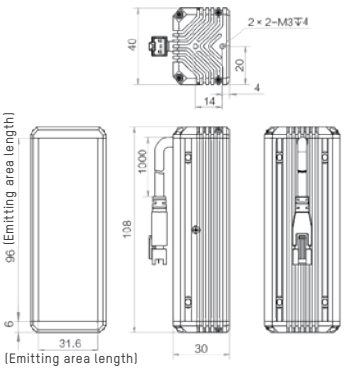
MV-LLDS-H-50-40



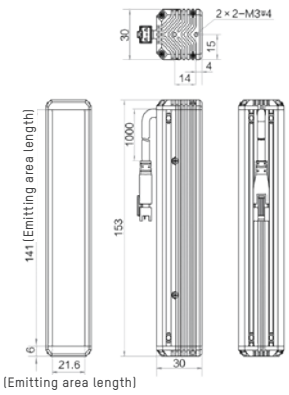
MV-LLDS-H-100-30



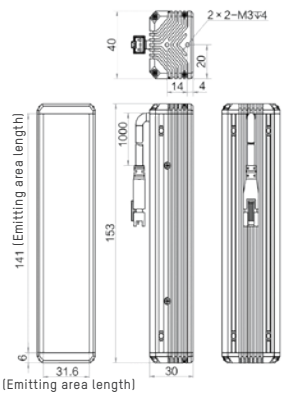
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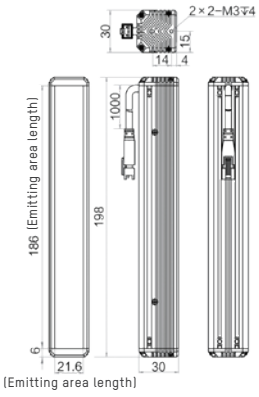
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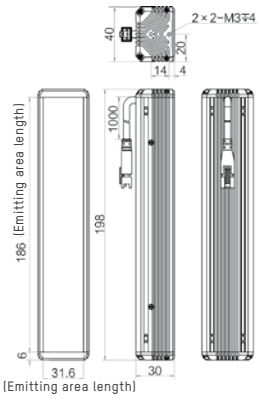
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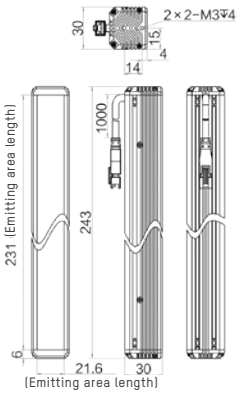
MV-LLDS-H-200-30



MV-LLDS-H-200-40

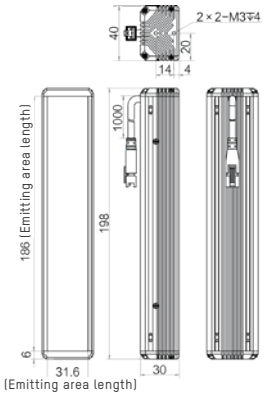


MV-LLDS-H-250-30

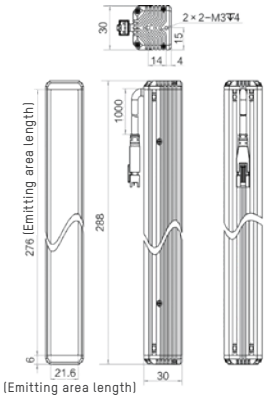


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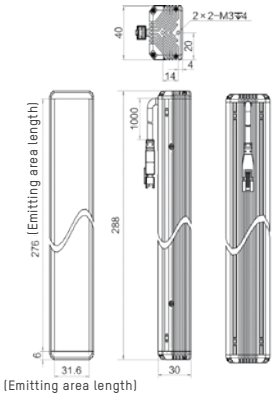
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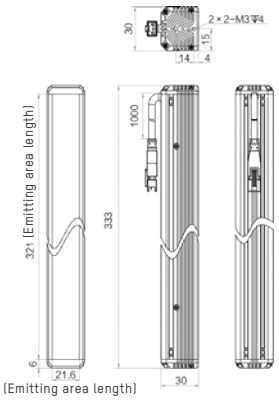
MV-LLDS-H-300-30



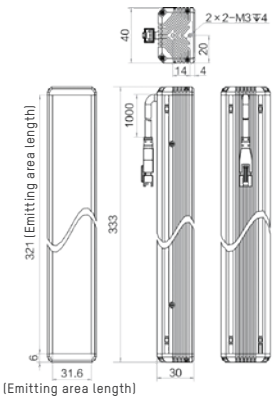
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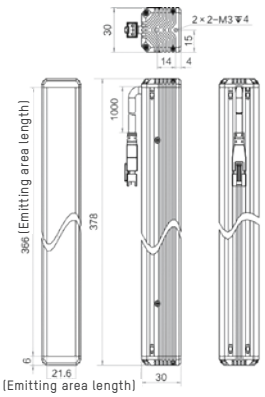
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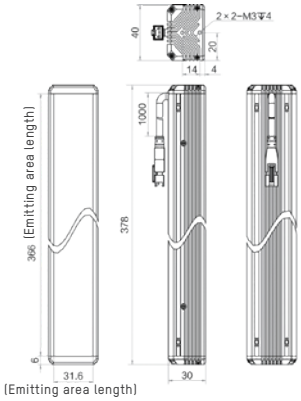
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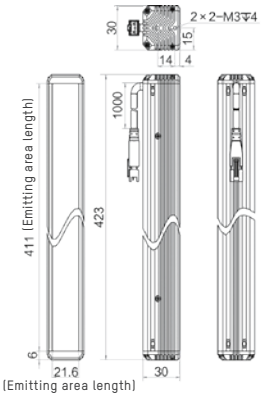
MV-LLDS-H-400-30



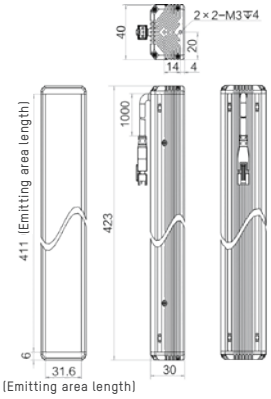
MV-LLDS-H-400-40



MV-LLDS-H-450-30

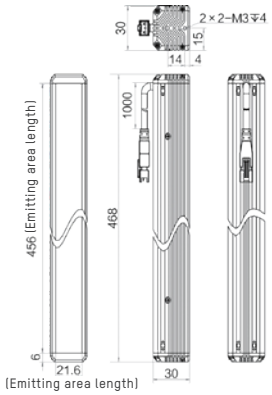


MV-LLDS-H-450-40

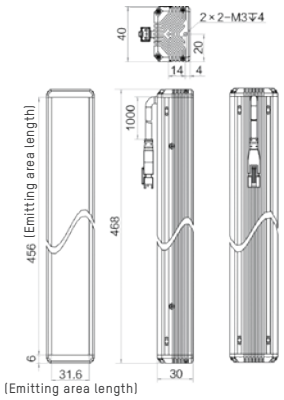


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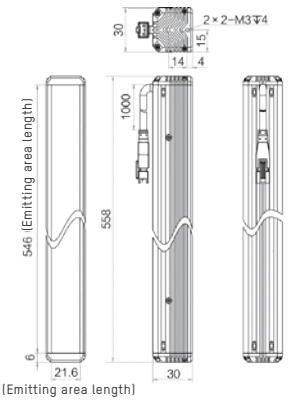
MV-LLDS-H-500-30



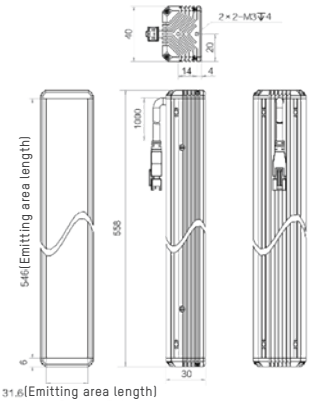
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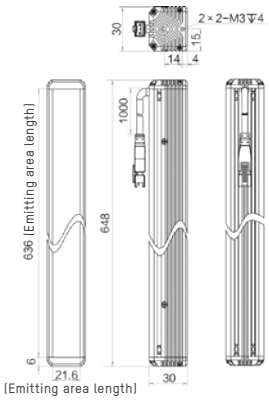
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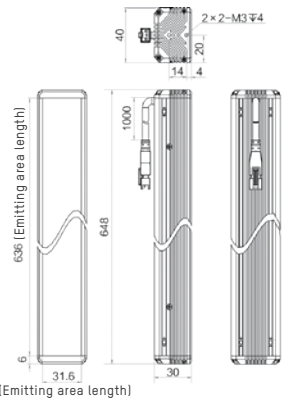
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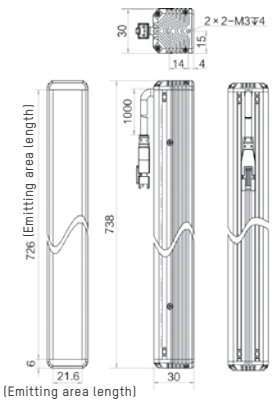
MV-LLDS-H-700-30



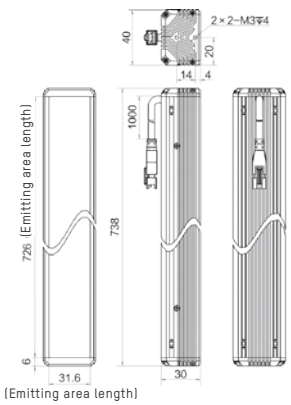
MV-LLDS-H-700-40



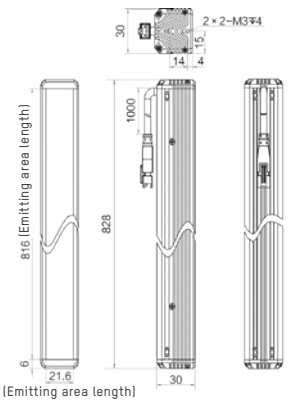
MV-LLDS-H-800-30



MV-LLDS-H-800-40

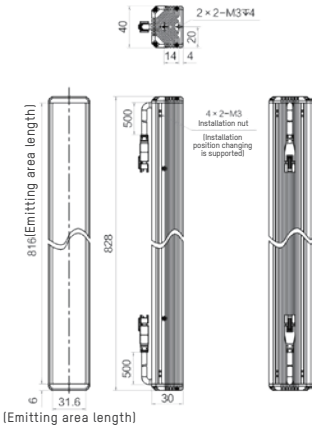


MV-LLDS-H-900-30

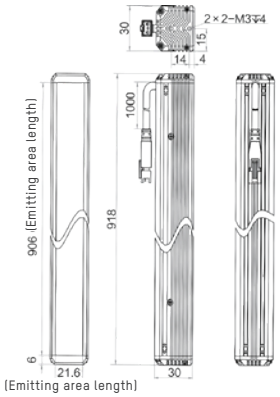


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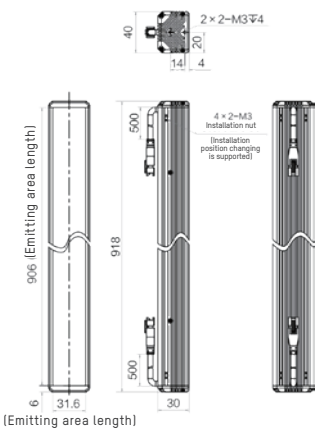
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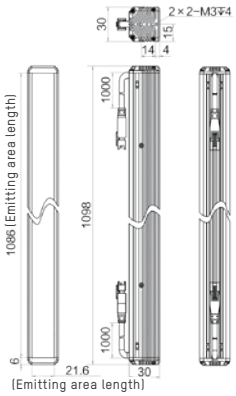
MV-LLDS-H-1000-30



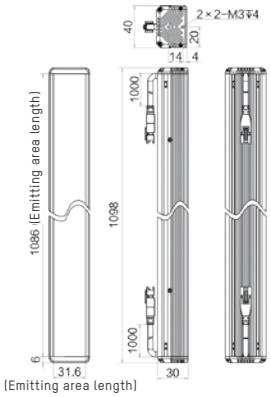
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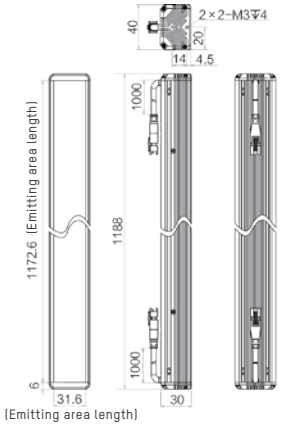
MV-LLDS-H-1200-30



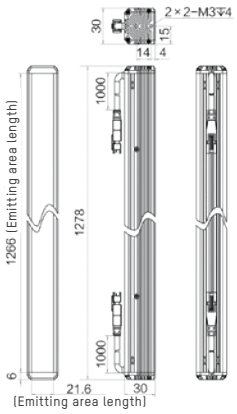
MV-LLDS-H-1200-40



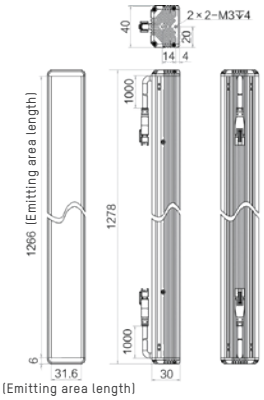
MV-LLDS-H-1300-40



MV-LLDS-H-1400-30



MV-LLDS-H-1400-40



Unit:mm

Flat Light

Hikrobot Style Standard Flat Light MV-LBSS-H Series

Introduction

MV-LBSS-H series flat lights adopt high-density LED arrays, and provide backplane lighting with available and large coverage. Every flat light feature excellent uniformity, and models with various dimensions are available.



Key Features

- Adopts a high-density LED array to achieve uniform lighting.
- Provides side mounting brackets with flexible installation.

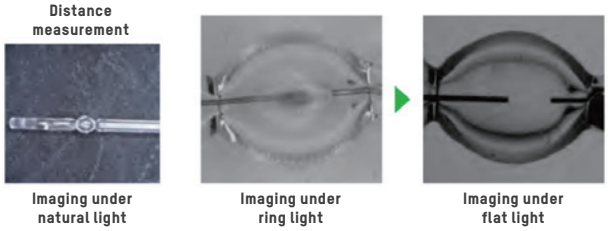
Application Scenarios

- Workpiece size/contour measurement.
- Product position detection.
- Defect detection of transmitted objects.

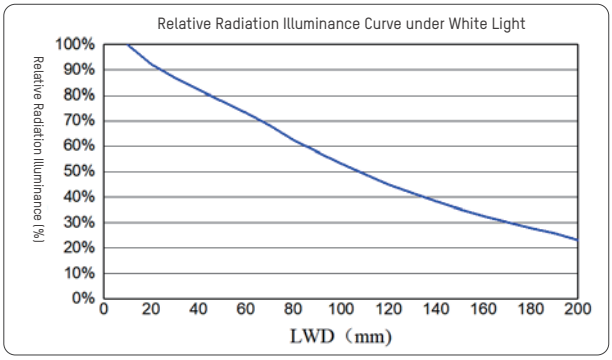
Lighting



Lighting Cases



Relative Radiation Illuminance Curve



Specification

Model	MV-LBSS-H-30-30-W	MV-LBSS-H-50-30-W	MV-LBSS-H-50-50-W	MV-LBSS-H-80-80-W
Color	White	White	White	White
Center illuminance	≥ 2700 lux @ WD=100 mm	≥ 6000 lux @ WD=100 mm	≥ 10000 lux @ WD=100 mm	≥ 20000 lux @ WD=100 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	62 mm × 43 mm × 18 mm	82 mm × 43 mm × 18 mm	82 mm × 63.2 mm × 18 mm	112 mm × 93 mm × 18 mm
Emitting area dimension	30 mm × 30 mm	50 mm × 30 mm	50 mm × 50 mm	80 mm × 80 mm
Weight	0.09 kg	0.1 kg	0.15 kg	0.2 kg
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Power	2.3 W	3.3 W	4.4 W	14.9 W
Input voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

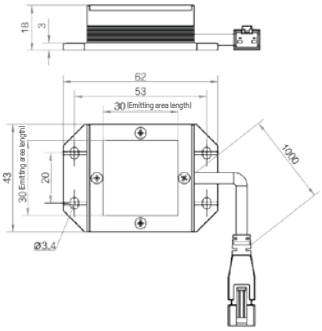
Model	MV-LBSS-H-100-100-W	MV-LBSS-H-120-120-W	MV-LBSS-H-150-100-W	MV-LBSS-H-150-150-W
Color	White	White	White	White
Center illuminance	≥ 40000 lux @ WD=100 mm	≥ 31000 lux @ WD=100 mm	≥ 40000 lux @ WD=100 mm	≥ 60000 lux @ WD=100 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	132 mm × 113 mm × 18 mm	152 mm × 133 mm × 18 mm	182 mm × 113 mm × 18 mm	182 mm × 163 mm × 18 mm
Emitting area dimension	100 mm × 100 mm	120 mm × 120 mm	150 mm × 100 mm	150 mm × 150 mm
Weight	0.3 kg	0.4 kg	0.45 kg	0.5 kg
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Power	23 W	22 W	25 W	36 W
Input voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

Model	MV-LBSS-H-200-200-W	MV-LBSS-H-250-150-W	MV-LBSS-H-250-250-W	MV-LBSS-H-300-200-W
Color	White	White	White	White
Center illuminance	≥ 80000 lux @ WD=100 mm	≥ 60000 lux @ WD=100 mm	≥ 50000 lux @ WD=100 mm	≥ 60000 lux @ WD=100 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	232 mm × 213 mm × 18 mm	282 mm × 163 mm × 19 mm	282 mm × 263 mm × 19 mm	332 mm × 213 mm × 19 mm
Emitting area dimension	200 mm × 200 mm	250 mm × 150 mm	250 mm × 250 mm	300 mm × 200 mm
Weight	0.8 kg	0.8 kg	1.1 kg	1.4 kg
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	"Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)"	"Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)"	"Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)"	"Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)"
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Power	66 W	46 W	57.1 W	69.4 W
Input voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

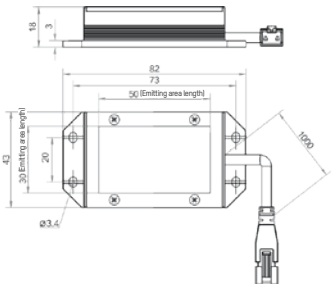
Model	MV-LBSS-H-300-300-W	MV-LBSS-H-350-250-W	MV-LBSS-H-400-300-W	MV-LBSS-H-400-300-R
Color	White	White	White	Red
Center illuminance	≥ 60000 lux @ WD=100 mm	≥ 60000 lux @ WD=100 mm	≥ 60000 lux @ WD=100 mm	≥ 20000 lux @ WD=100 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	338 mm × 315 mm × 21 mm	388 mm × 265 mm × 21 mm	438 mm × 315 mm × 21 mm	438 mm × 315 mm × 21 mm
Emitting area dimension	300 mm × 300 mm	350 mm × 250 mm	400 mm × 300 mm	400 mm × 300 mm
Weight	2 kg	2 kg	3 kg	3 kg
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Power	87.9 W	89.6 W	124.9W	89.5 W
Input voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	12M-2A	12M-2A	12M-2A	12M-2A

Dimension

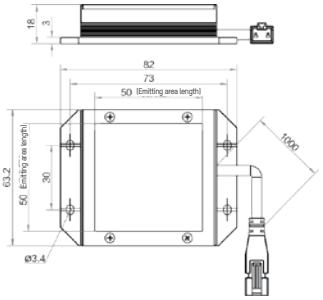
MV-LBSS-H-30-30-W



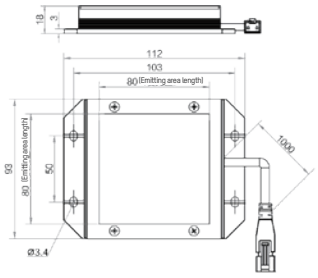
MV-LBSS-H-50-30-W



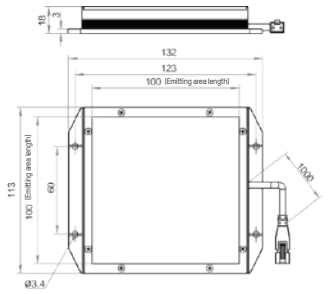
MV-LBSS-H-50-50-W



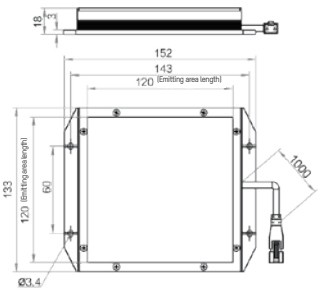
MV-LBSS-H-80-80-W



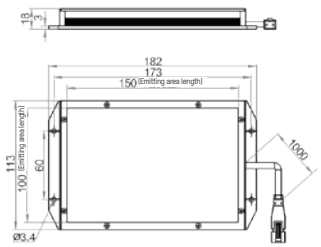
MV-LBSS-H-100-100-W



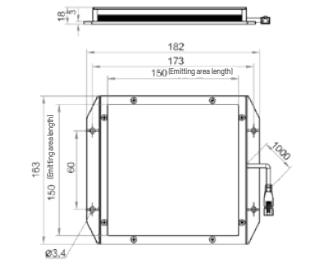
MV-LBSS-H-120-120-W



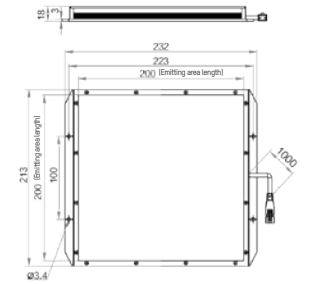
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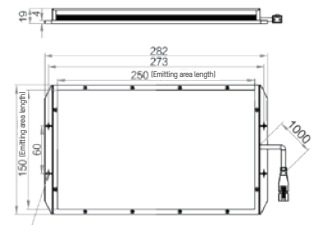
MV-LBSS-H-150-150-W



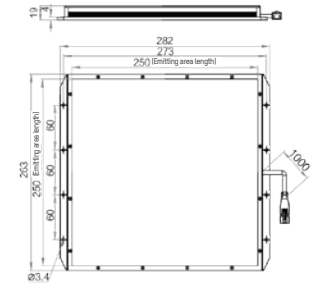
MV-LBSS-H-200-200-W



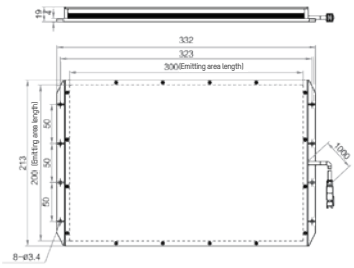
MV-LBSS-H-250-150-W



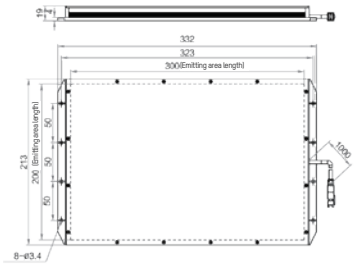
MV-LBSS-H-250-250-W



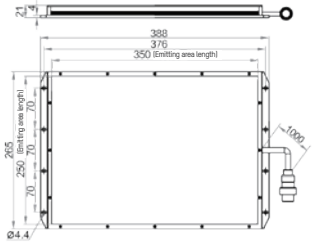
MV-LBSS-H-300-200-W



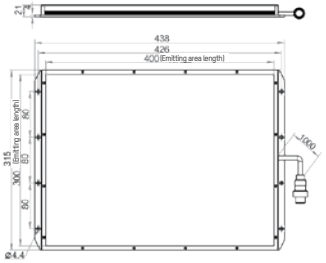
MV-LBSS-H-300-300-W



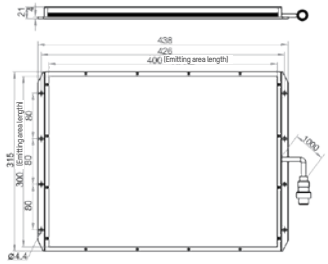
MV-LBSS-H-350-250-W



MV-LBSS-H-400-300-W



MV-LBSS-H-400-300-R



Unit:mm

Hikrobot Style Flat Light With Hole MV-LBES-H Series

Introduction

MV-LBES-H series flat dome lights, with the opening (circular/square hole) design on the basis of standard flat lights, can achieve high brightness and uniform front lighting. Models with various dimensions are available.



Key Features

- High lighting uniformity.
- Available in models with various outer dimensions.

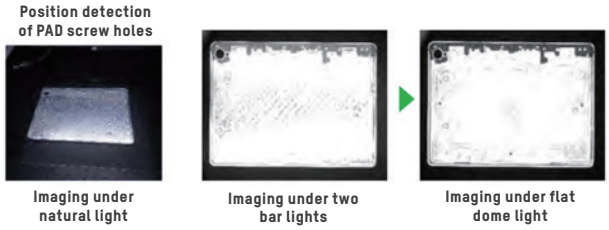
Application Scenarios

- Printing materials / workpiece surface defect detection.
- Optical character recognition.
- Edge positioning of component contour.

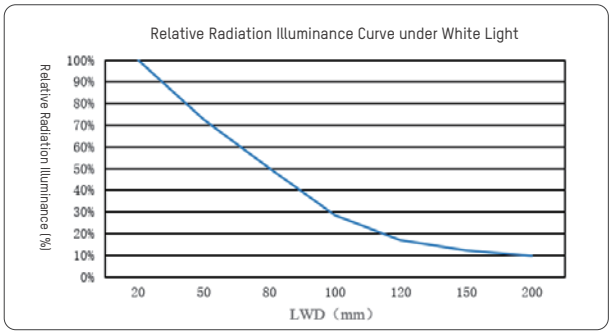
Lighting



Lighting Cases



Relative Radiation Illuminance Curve



Specification

Model	MV-LBES-H-50-50-W	MV-LBES-H-100-100-W	MV-LBES-H-120-120-W	MV-LBES-H-150-150-W
Color	White	White	White	White
Center illuminance	≥ 1000 lux @ WD=200 mm	≥ 7000 lux @ WD=200 mm	≥ 9200 lux @ WD=200 mm	≥ 14000 lux @ WD=200 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	82 mm × 63.2 mm × 19 mm	132 mm × 113 mm × 18 mm	152 mm × 133 mm × 18 mm	182 mm × 163 mm × 18 mm
Emitting area dimension	50 mm × 50 mm	100 mm × 100 mm	120 mm × 120 mm	150 mm × 150 mm
Bore dimension	20 mm × 20 mm	Φ 40 mm	Φ 40 mm	Φ 45 mm
Weight	0.2 kg	0.3 kg	0.4 kg	0.5 kg
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Power	2.2 W	12 W	17.6 W	28.2 W
Output voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

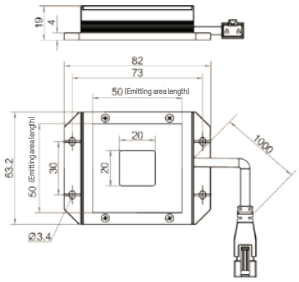
Model	MV-LBES-H-200-200-W	MV-LBES-H-250-150-W	MV-LBES-H-250-200-W	MV-LBES-H-250-250-W
Color	White	White	White	White
Center illuminance	≥ 27000 lux @ WD=200 mm	≥ 22000 lux @ WD=200 mm	≥ 25000 lux @ WD=200 mm	≥ 28000 lux @ WD=200 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	232 mm × 213 mm × 18 mm	282 mm × 163 mm × 19 mm	282 mm × 213 mm × 19 mm	282 mm × 263 mm × 19 mm
Emitting area dimension	200 mm × 200 mm	250 mm × 150 mm	250 mm × 200 mm	250 mm × 250 mm
Bore dimension	Φ 45 mm	Φ 50 mm	Φ 60 mm	Φ 50 mm
Weight	0.8 kg	0.8 kg	1 kg	1.1 kg
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Power	50.5 W	41 W	53 W	59 W
Output voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

Model	MV-LBES-H-250-250-R	MV-LBES-H-300-200-W	MV-LBES-H-300-300-W	MV-LBES-H-400-300-W
Color	Red	White	White	White
Center illuminance	≥ 13000 lux @ WD=200 mm	≥27000 lux @ WD=200 mm	≥30000 lux @ WD=200 mm	≥30000 lux @ WD=200 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	282 mm × 263 mm × 19 mm	332 mm × 213 mm × 19 mm	338 mm × 315 mm × 21 mm	438 mm × 315 mm × 21 mm
Emitting area dimension	250 mm × 250 mm	300 mm × 200 mm	300 mm × 300 mm	400 mm × 300 mm
Bore dimension	Φ 50 mm	Φ 60 mm	80 mm × 80 mm	Φ 50 mm
Weight	1.1 kg	1.2 kg	2 kg	2.7 kg
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Power	48 W	59.1 W	85 W	95 W
Output voltage	24 VDC	24 VDC	24 VDC	24 VDC
Connector type	SMR-03V-B	SMR-03V-B	12M-2A	12M-2A

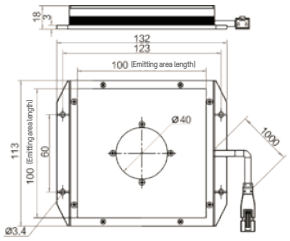
Model	MV-LBES-H-450-320-W	MV-LBES-H-600-400-W	MV-LBES-H-620-620-W
Color	White	White	White
Center illuminance	≥ 16000 lux @ WD=600 mm	≥ 13000 lux @ WD=600 mm	≥ 18000 lux @ WD=600 mm
Wavelength	R: 625 nm	R: 625 nm	R: 625 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	488 mm × 335 mm × 21 mm	676 mm × 430 mm × 25 mm	696 mm × 650 mm × 25 mm
Emitting area dimension	450 mm × 320 mm	600 mm × 400 mm	620 mm × 620 mm
Bore dimension	Φ 70 mm	Φ 50 mm	Φ 50 mm
Weight	3.2 kg	7.2 kg	10 kg
Cable length	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included
Power	216.5 W	194 W	298.8 W
Output voltage	24 VDC	24 VDC	24 VDC
Connector type	Dual-channel 19M-2A	Dual-channel 19M-2A	Dual-channel 19M-2A

Dimension

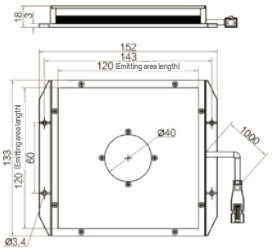
MV-LBES-H-50-50-W



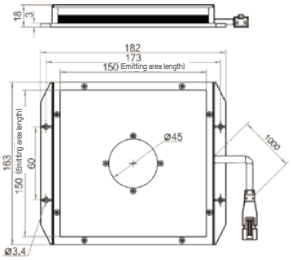
MV-LBES-H-100-100-W



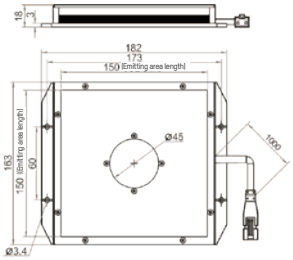
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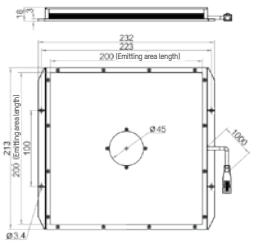
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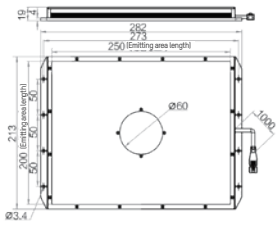
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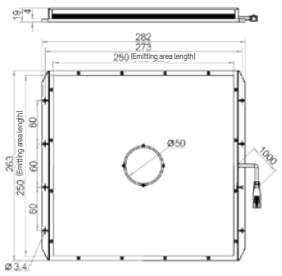
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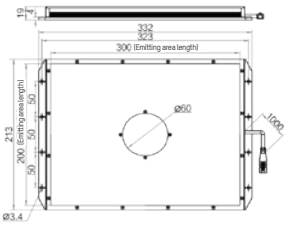
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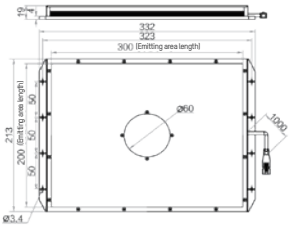
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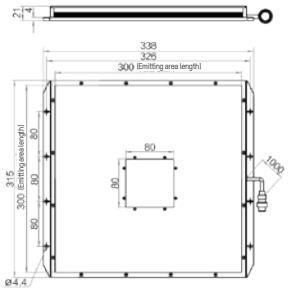
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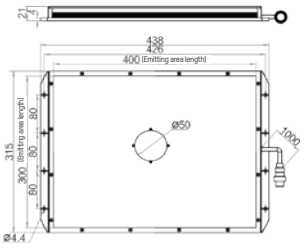
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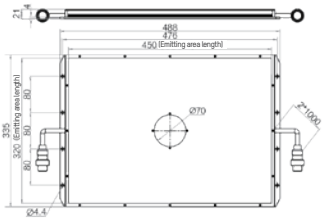
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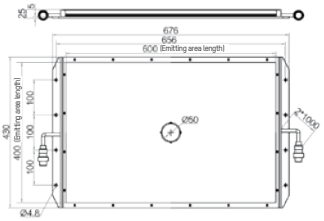
MV-LBES-H-400-300-W



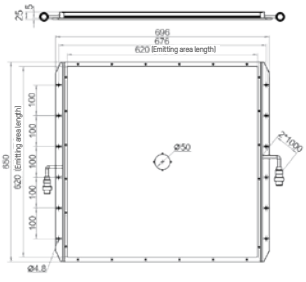
MV-LBES-H-450-320-W



MV-LBES-H-600-400-W



MV-LBES-H-620-620-W



Unit:mm

Line-Scan Light

Hikrobot Style Line-Scan Light MV-LTDS-H Series



Introduction

MV-LTDS-H series line-scan lights adopt LED lamp beads with high brightness and high power, featuring flexible installation and efficient focusing. With the combination of structural cooling and fan cooling, every line-scan light offers excellent heat dissipation and service life.

Key Features

- High-power LED lamp beads, combined with a highly focusing structure, achieving the illuminance of up to 1000K lux on the surface of light source.
- The enclosure with a cooling fan prolongs the service life of the light source.
- Provides multi-side nut slots for flexible installation.

Application Scenarios

- Glass surface scratch detection.
- Printed character inspection.
- Phone screen detection.
- PCB defect detection.

Lighting

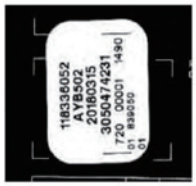


Lighting Cases

Printing inspection

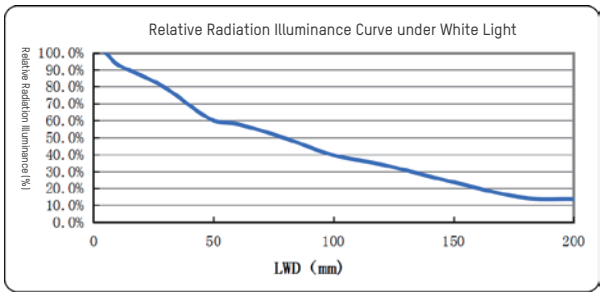


Imaging under line-scan light



Details of imaging result

Relative Radiation Illuminance Curve



Specification

Model	MV-LTDS-H-100-W	MV-LTDS-H-200-W	MV-LTDS-H-300-W	MV-LTDS-H-400-W
Color	White	White	White	White
Best working distance	10 mm to 200 mm	10 mm to 200 mm	10 mm to 200 mm	10 mm to 200 mm
Color temperature	6000K to 7000K	6000K to 7000K	6000K to 7000K	6000K to 7000K
Center illuminance	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm
Dimension	150 mm × 58 mm × 90.5 mm	250 mm × 58 mm × 90.5 mm	350 mm × 58 mm × 90.5 mm	450 mm × 58 mm × 90.5 mm
Emitting area dimension	100 mm × 17 mm	200 mm × 17 mm	300 mm × 17 mm	400 mm × 17 mm
LED rows	1	1	1	1
Weight	1.09 kg	1.6 kg	2.11 kg	2.62 kg
Cable length	Additional options	Additional options	Additional options	Additional options
Cooling mode	Fan cooling	Fan cooling	Fan cooling	Fan cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Power	42 W	84 W	126 W	168 W
Input voltage	48 VDC	48 VDC	48 VDC	48 VDC
Connector type	19M-8H	19M-8H	19M-8H	19M-8H

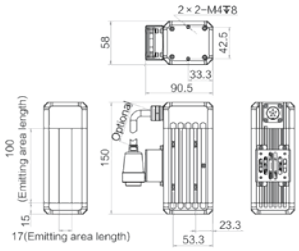
Model	MV-LTDS-H-500-W	MV-LTDS-H-600-W	MV-LTDS-H-700-W	MV-LTDS-H-800-W
Color	White	White	White	White
Best working distance	10 mm to 200 mm	10 mm to 200 mm	10 mm to 200 mm	10 mm to 200 mm
Color temperature	6000K to 7000K	6000K to 7000K	6000K to 7000K	6000K to 7000K
Center illuminance	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm
Dimension	550 mm × 58 mm × 90.5 mm	650 mm × 58 mm × 90.5 mm	750 mm × 58 mm × 90.5 mm	850 mm × 58 mm × 90.5 mm
Emitting area dimension	500 mm × 17 mm	600 mm × 17 mm	700 mm × 17 mm	800 mm × 17 mm
LED rows	1	1	1	1
Weight	3.14 kg	3.65 kg	4.16 kg	4.68 kg
Cable length	Additional options	Additional options	Additional options	Additional options
Cooling mode	Fan cooling	Fan cooling	Fan cooling	Fan cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Power	210 W	252 W	294 W	336 W
Input voltage	48 VDC	48 VDC	48 VDC	48 VDC
Connector type	19M-8H	19M-8H	19M-8H	19M-8H

Model	MV-LTDS-H-900-W	MV-LTDS-H-1000-W	MV-LTDS-H-1100-W	MV-LTDS-H-1200-W
Color	White	White	White	White
Best working distance	10 mm to 200 mm	10 mm to 200 mm	10 mm to 200 mm	10 mm to 200 mm
Color temperature	6000K to 7000K	6000K to 7000K	6000K to 7000K	6000K to 7000K
Center illuminance	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm
Dimension	970 mm × 58 mm × 90.5 mm	1070 mm × 58 mm × 90.5 mm	1170 mm × 58 mm × 90.5 mm	1270 mm × 58 mm × 90.5 mm
Emitting area dimension	900 mm × 17 mm	1000 mm × 17 mm	1100 mm × 17 mm	1200 mm × 17 mm
LED rows	1	1	1	1
Weight	5.19 kg	5.71 kg	6.22 kg	6.73 kg
Cable length	Additional options	Additional options	Additional options	Additional options
Cooling mode	Fan cooling	Fan cooling	Fan cooling	Fan cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Power	378 W	420 W	462 W	504 W
Input voltage	48 VDC	48 VDC	48 VDC	48 VDC
Connector type	Dual-channel 19M-8H	Dual-channel 19M-8H	Dual-channel 19M-8H	Dual-channel 19M-8H

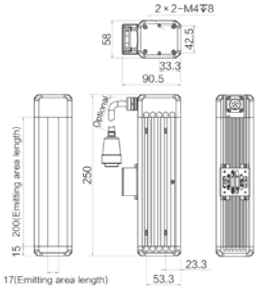
Model	MV-LTDS-H-1300-W	MV-LTDS-H-1400-W	MV-LTDS-H-1500-W
Color	White	White	White
Best working distance	10 mm to 200 mm	10 mm to 200 mm	10 mm to 200 mm
Color temperature	6000K to 7000K	6000K to 7000K	6000K to 7000K
Center illuminance	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm	≥ 1000K lux @ WD=50 mm
Dimension	1370 mm × 58 mm × 90.5 mm	1470 mm × 58 mm × 90.5 mm	1570 mm × 58 mm × 90.5 mm
Emitting area dimension	1300 mm × 17 mm	1400 mm × 17 mm	1500 mm × 17 mm
LED rows	1	1	1
Weight	7.25 kg	7.76 kg	8.27 kg
Cable length	Additional options	Additional options	Additional options
Cooling mode	Fan cooling	Fan cooling	Fan cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Power	546 W	588 W	630 W
Input voltage	48 VDC	48 VDC	48 VDC
Connector type	Dual-channel 19M-8H	Dual-channel 19M-8H	Dual-channel 19M-8H

Dimension

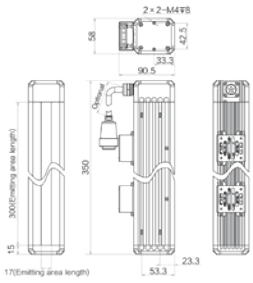
MV-LTDS-H-100-W



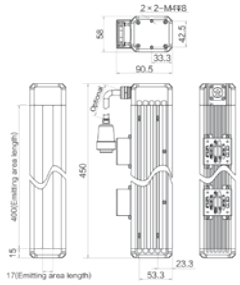
MV-LTDS-H-200-W



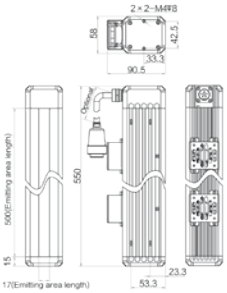
MV-LTDS-H-300-W



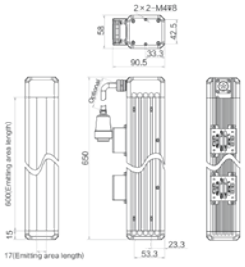
MV-LTDS-H-400-W



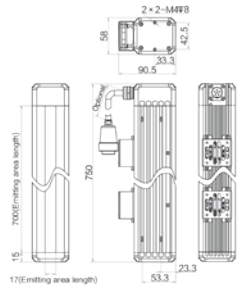
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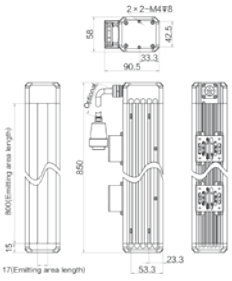
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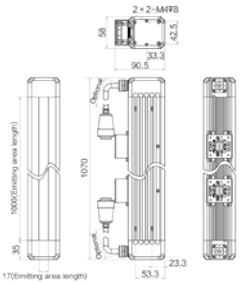
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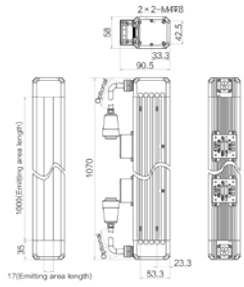
MV-LTDS-H-800-W



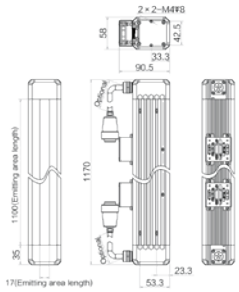
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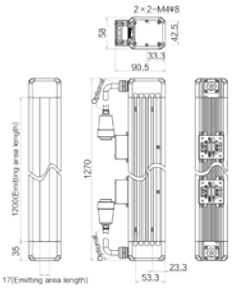
MV-LTDS-H-1000-W



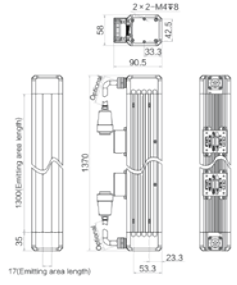
MV-LTDS-H-1100-W



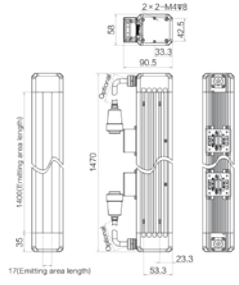
MV-LTDS-H-1200-W



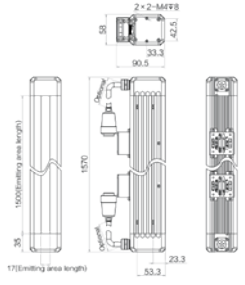
MV-LTDS-H-1300-W



MV-LTDS-H-1400-W



MV-LTDS-H-1500-W



Unit:mm

Coaxial Light

Hikrobot Style Standard Coaxial Light MV-LCDS-H Series



Introduction

MV-LCDS-H series standard coaxial lights provide uniform illumination along the same axis as the camera, ensuring clear imaging of objects with high-brightness coaxial lighting.

Key Features

- Adopts a special beam splitter to improve lighting efficiency.
- Provides efficient heat dissipation to extend service life.

Application Scenarios

- Appearance inspection of smooth surface / reflective object surface.
- Short/open circuit and other defects detection of PCB.
- 2D code / barcode recognition.
- Mark point position detection.
- DConnector pin detection.

Lighting



Lighting Cases

2D code recognition



Imaging under natural light

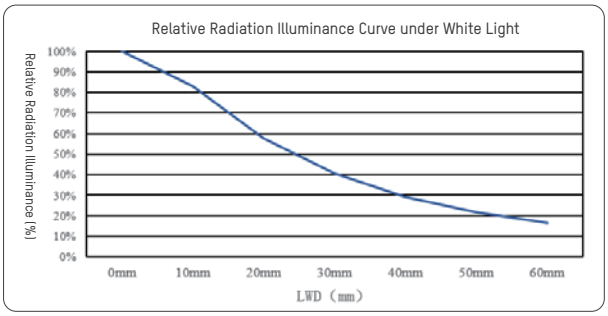


Imaging under ring light



Imaging under coaxial light

Relative Radiation Illuminance Curve



Specification

Model	MV-LCDS-H-30-30-W	MV-LCDS-H-30-30-B	MV-LCDS-H-30-30-R	MV-LCDS-H-40-40-W
Color	White	Blue	Red	White
Dimension	69 mm × 37.9 mm × 38 mm	69 mm × 37.9 mm × 38 mm	69 mm × 37.9 mm × 38 mm	69 mm × 45.7 mm × 46 mm
Emitting area dimension	32.5 mm × 32 mm	32.5 mm × 32 mm	32.5 mm × 32 mm	40 mm × 40 mm
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Weight	132 g	132 g	132 g	167 g
Power	3.3 W	3.6 W	2.2 W	5.4 W
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

Model	MV-LCDS-H-40-40-B	MV-LCDS-H-40-40-R	MV-LCDS-H-50-50-W	MV-LCDS-H-50-50-B
Color	Blue	Red	White	Blue
Dimension	69 mm × 45.7 mm × 46 mm	69 mm × 45.7 mm × 46 mm	79 mm × 59.7 mm × 56 mm	79 mm × 59.7 mm × 56 mm
Emitting area dimension	40 mm × 40 mm	40 mm × 40 mm	50 mm × 50 mm	50 mm × 50 mm
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Weight	167 g	167 g	250 g	250 g
Power	5.9 W	4.1 W	5.5 W	7 W
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

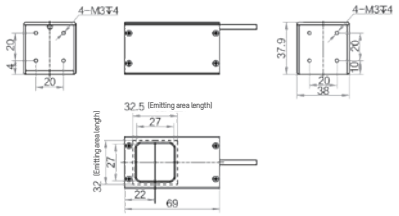
Model	MV-LCDS-H-50-50-R	MV-LCDS-H-60-60-W	MV-LCDS-H-60-60-B	MV-LCDS-H-60-60-R
Color	Red	White	Blue	Red
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	79 mm × 59.7 mm × 56 mm	89 mm × 67.3 mm × 66 mm	89 mm × 67.3 mm × 66 mm	89 mm × 67.3 mm × 66 mm
Emitting area dimension	50 mm × 50 mm	60 mm × 60 mm	60 mm × 60 mm	60 mm × 60 mm
Cable length	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included	Included	Included
Weight	250 g	320 g	320 g	320 g
Power	4.7 W	9.6 W	8.7 W	6.7 W
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

Model	MV-LCDS-H-70-70-W	MV-LCDS-H-70-70-IR850
Color	White	Infrared
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	99 mm × 77.7 mm × 76 mm	99 mm × 77.7 mm × 76 mm
Emitting area dimension	70 mm × 70 mm	70 mm × 70 mm
Cable length	1 m	1 m
Cooling mode	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Diffuse plate included	Included	Included
Weight	417 g	417 g
Power	10.8 W	12.6 W
Connector type	SMR-03V-B	SMR-03V-B

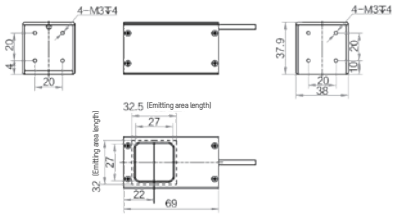
MV-LLDS-H	
Wavelength	B:465 nm R:625 nm IR:850 nm
Color temperature	W: 6000K to 7000K

Dimension

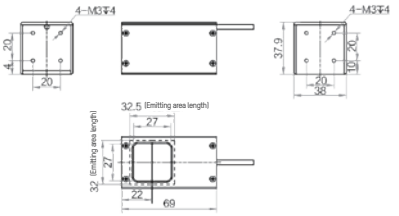
MV-LCDS-H-30-30-W



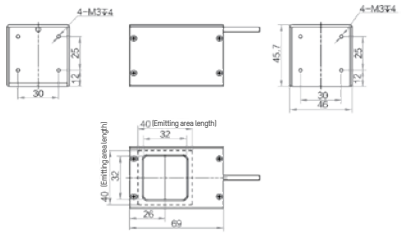
MV-LCDS-H-30-30-B



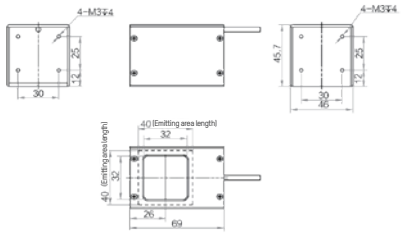
MV-LCDS-H-30-30-R



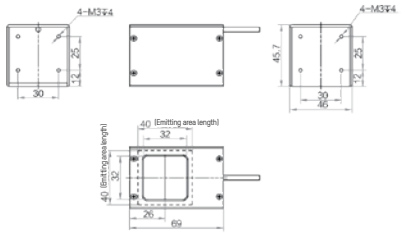
MV-LCDS-H-40-40-W



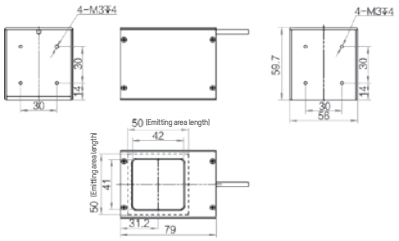
MV-LCDS-H-40-40-B



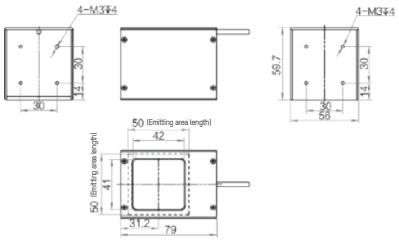
MV-LCDS-H-40-40-R



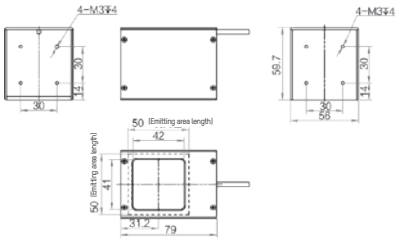
MV-LCDS-H-50-50-W



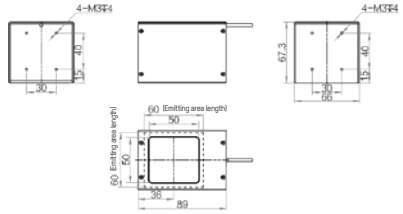
MV-LCDS-H-50-50-B



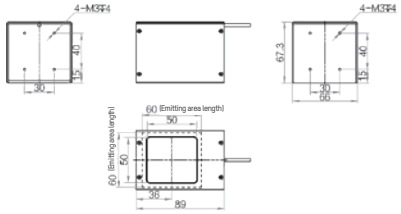
MV-LCDS-H-50-50-R



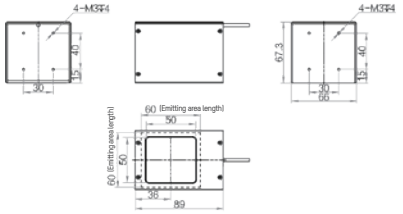
MV-LCDS-H-60-60-W



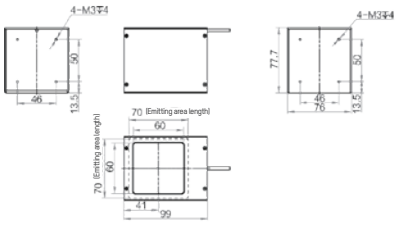
MV-LCDS-H-60-60-B



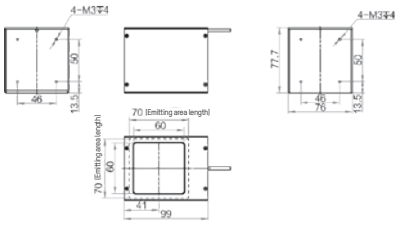
MV-LCDS-H-60-60-R



MV-LCDS-H-70-70-W



MV-LCDS-H-70-70-IR850



Unit:mm

Standard Spot Light

Hikrobot Style Standard Spot Light MV-LDSS-H Seriess

Introduction

MV-LDSS-H series standard spot lights adopt special light-guiding structures and LED lamp beads with high brightness. With a brand-new appearance and heat dissipation design, every spot light provides greater stability and longer service life.



Key Features

- Adopts special light guide at optical outlet to achieve brightness concentration.
- Features a compact structure with efficient heat dissipation.
- Compatible with telecentric series and other lenses.

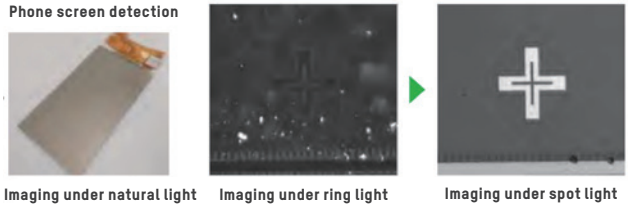
Application Scenarios

- Mark point position detection.
- Chip character inspection.
- Electronic component quality inspection.

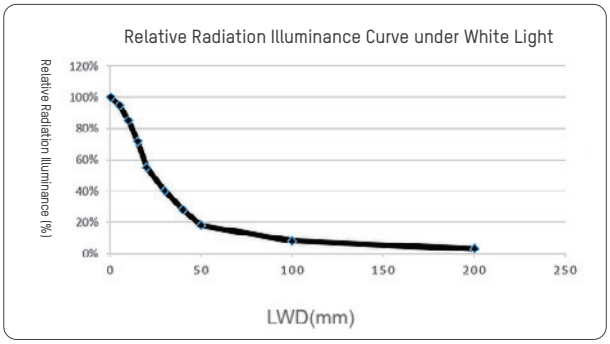
Lighting



Lighting Cases



Relative Radiation Illuminance Curve



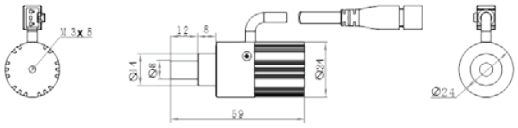
Specification

Model	MV-LDSS-H-8-3-W	MV-LDSS-H-8-3-B	MV-LDSS-H-8-3-R	MV-LDSS-H-8-3-G	MV-LDSS-H-8-3-Y
Color	White	Blue	Red	Green	Yellow
Center illuminance	> 20K lux @ WD=100 mm	> 4K lux @ WD=100 mm	> 7K lux @ WD=100 mm	> 25K lux @ WD=100 mm	> 20K lux @ WD=100 mm
Best working distance	65 mm to 200 mm	65 mm to 200 mm	65 mm to 200 mm	65 mm to 200 mm	65 mm to 200 mm
Drive mode	Constant current	Constant current	Constant current	Constant current	Constant current
Dimension	59 mm × Φ24 mm	59 mm × Φ24 mm	59 mm × Φ24 mm	59 mm × Φ24 mm	59 mm × Φ24 mm
Optical outlet diameter	Φ8 mm	Φ8 mm	Φ8 mm	Φ8 mm	Φ8 mm
Weight	75 g	75 g	75 g	75 g	75 g
Cable length	1 m	1 m	1 m	1 m	1 m
Cooling mode	Natural cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Power	2 W	2.1 W	1.7 W	2.1 W	2 W
Input current	680 mA	680 mA	680 mA	680 mA	680 mA
Connector type	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B	SMR-03V-B

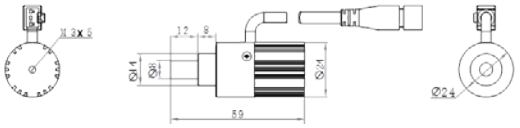
MV-LLDS-H	
Wavelength	B: 465 ~ 475 nm R: 620 ~ 630 nm G: 515 ~ 530 nm Y: 580 ~ 595 nm
Color temperature	W: 6000 ~ 7000K

Dimension

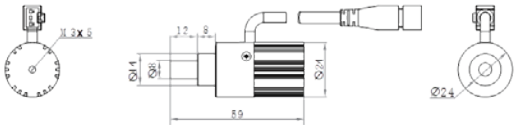
MV-LDSS-H-8-3-W



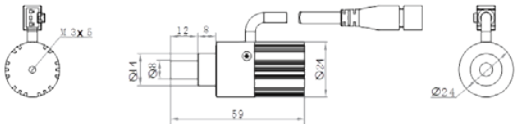
MV-LDSS-H-8-3-B



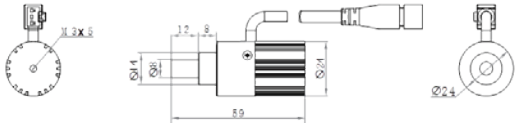
MV-LDSS-H-8-3-R



MV-LDSS-H-8-3-G



MV-LDSS-H-8-3-Y



Unit:mm

Hikrobot Style Focused Spot Light MV-LDFS-H Series

Introduction

MV-LDFS-H series focused spot lights feature special optical lens structures and high-brightness LED lamp beads. Every focused spot light delivers a circular direct lighting effect characterized by high focus and uniformity. Its compact size makes it suitable for lighting scenarios with limited installation space.



Key Features

- Achieves circular direct lighting with uniform illuminance in central lighting area.
- Adopts a high light focusing design.
- Features a compact size, suitable for extremely narrow installation space.

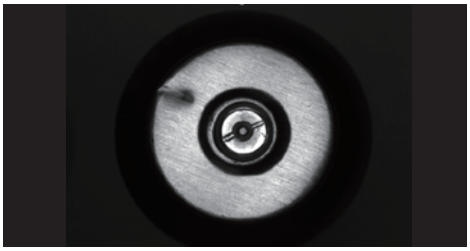
Application Scenarios

- Mark point position detection
- Chip character inspection.
- Electronic component quality inspection.

Lighting

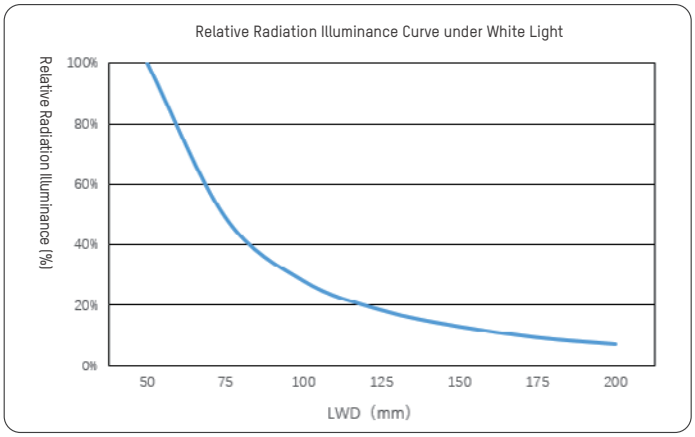


Lighting Cases



Defect detection of oral liquid bottle cap:
Defects on curved surfaces can be illuminated under spot light.

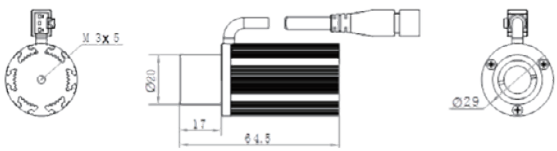
Relative Radiation Illuminance Curve



Specification

Model	MV-LDFS-H-20-6-W
Color	White
Center illuminance	≥ 140K lux @ WD=100 mm
Best working distance	65 mm to 200 mm
Drive mode	Constant current
Color temperature	W: 6000K to 7000K
Dimension	64.5 mm × Φ29 mm
Optical outlet diameter	Φ20 mm
Weight	110 g
Cable length	1 m
Cooling mode	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 90% RH (no condensation)
Power	3.2 W
Input current	1100 mA
Connector type	SMR-03V-B

Dimension



Unit:mm

Hikrobot Style High-Brightness Spot Light MV-LDFM-H Series

Introduction

MV-LDFM-H series high-brightness spot lights feature special optical lens structures and high-brightness LED lamp beads. Every high-brightness spot light delivers a circular direct lighting characterized by high brightness, focus, and uniformity. Its compact size makes it suitable for lighting scenarios with limited installation space and high brightness requirements.



Key Features

- Adopts a high focusing design with high brightness, surface illuminance (center) > 2000K lux.
- Features a compact size, suitable for extremely narrow installation space.

Application Scenarios

- Contour/dimension inspection.
- Surface defect detection.

Lighting

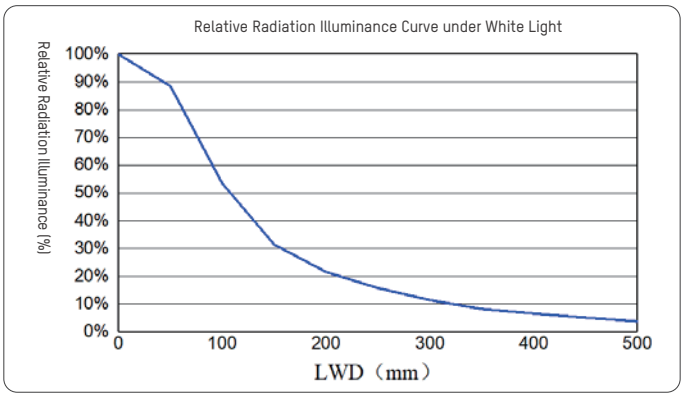


Lighting Cases



Mark point detection on phone screen:
Due to the small field of view, a high-brightness spot light can be used with a telecentric lens and coaxial light to make the mark points clearly visible.

Relative Radiation Illuminance Curve

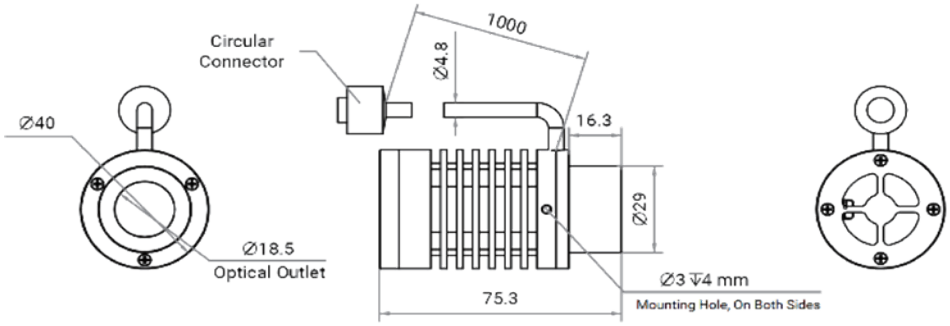


Specification

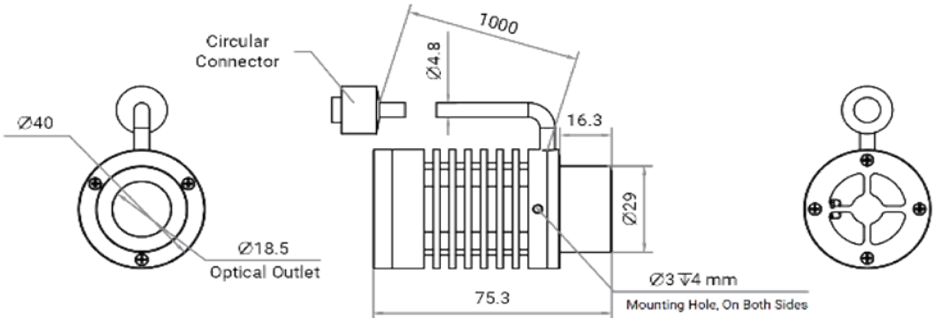
Model	MV-LDFM-H-20-10-W	MV-LDFM-H-20-5-IR850
Color	White	Infrared
Center illuminance	> 400K lux @ WD=100 mm	> 150m W/cm2 @ WD=100 mm
Best working distance	50 mm to 500 mm	50 mm to 500 mm
Drive mode	Constant current	Constant current
Wavelength	IR850: 850 nm	IR850: 850 nm
Color temperature	W: 6000K to 7000K	W: 6000K to 7000K
Dimension	75.3 mm × Φ40 mm	75.3 mm × Φ40 mm
Optical outlet diameter	Φ18.5 mm	Φ18.5 mm
Weight	0.1 kg	0.1 kg
Cable length	1 m	1 m
Cooling mode	Natural cooling	Natural cooling
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 80°C (–4 °F to 176 °F)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 80°C (–4 °F to 176 °F)
Humidity	5% RH to 90% RH (no condensation)	5% RH to 90% RH (no condensation)
Power	9 W	5 W
Input current	3:00 am	1.5 A
Connector type	12M-5A	12M-5A

Dimension

MV-LDFM-H-20-10-W



MV-LDFM-H-20-5-IR850



Unit:mm

Hikrobot Style Light Controller Series

Hikrobot style light controller MV-LE series includes MV-LE100 analog constant voltage light controller series, MV-LE200 digital constant voltage light controller series, and MV-LE201 digital constant current series. Designed with a Hikrobot family style, these light controllers have stable and reliable performance and are adaptive to Hikrobot style light source series.



Stable performance and flexible control

Analog series support stepless dimming via knob control, helping users realize quick deployment. Digital series supports precise dimming via button control, and parameters can be configured through the communication interface. Continuous lighting mode or trigger mode are both supported. Equipped with the unique timer feature, which helps to implement signal communication between multiple channels.



Professional tool and complete facilities

Multiple parameter configuration methods including the panel, serial port, and network interface are supported. An installation-free demo is provided, saving you the trouble of checking the controller communication protocol. MVS/SDK are integrated, which suits well the development habits of industrial cameras and makes secondary development easier.

Model Selection

Light source	Model	Total Power	Channel	Supply Voltage	Port
Analog constant voltage light controller	MV-LE100-*	48 W to 500 W	1 to 4	24 VDC/100 VAC to 240 VAC	SMR-03V-BC/12M-2F/19M-2E
Digital constant voltage light controller	MV-LE200-*	48 W to 200 W	2 to 6	24 VDC/100 VAC to 240 VAC	SMR-03V-BC
Spot light-dedicated digital constant current light controller	MV-LE201-*	10 W to 30 W	2	24 VDC	SMR-03V-BC/12M-5F
Line-scan light-dedicated digital constant current light controller	MV-LE201-*	200 W to 750 W	2	100 VAC to 240 VAC	19M-8H (male)
Program-controlled light controller	MV-LE202-*	280 W	1	100 VAC to 240 VAC	18MF-5B (female)



Analog Light Controller (Generic)

Hikrobot Style Analog Constant Voltage Light Controller
MV-LE100-*W24-** Series

Introduction

MV-LE100-*W24-** analog constant voltage light controller supports stepless brightness adjustment and multi-channel light output. It provides trigger input connectors and device management interface, helping users realize quick deployment of machine vision light source on site.





Key Features

- Adopts constant voltage control and supports stepless brightness adjustment.
- Adopts knob control on control panel, and you can plug and play.
- Provides multi-channel opto-isolated input and flexible signal linkage.
- Adopts industrial design and supports installation via guide rail or screw hole.
- Supports overcurrent, overload, and short circuit protection.

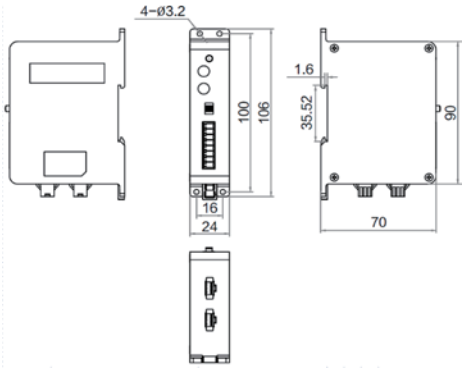
Specification

Model	MV-LE100-24W24-2	MV-LE100-24W24-2T-PoE	MV-LE100-48W24-2	MV-LE100-60W24-4D	MV-LE100-120W24-4	MV-LE100-200W24-2BD	MV-LE100-500W24-1ED
Drive mode	Analog, constant voltage						
Lighting mode	Continuous, strobe						
Channel	2-channel			4-channel		2-channel	1-channel
Dimming mode	Control panel (knob)	Software (network interface)	Control panel (knob)	Control panel (knob), software (serial port)	Control panel (knob)	Control panel (knob), software (serial port)	
Lighting response time	< 550 μs	< 550 μs	< 550 μs	< 300 μs	< 100 μs	< 100 μs	< 10 μs
Trigger mode	External trigger	Internal trigger	External trigger				

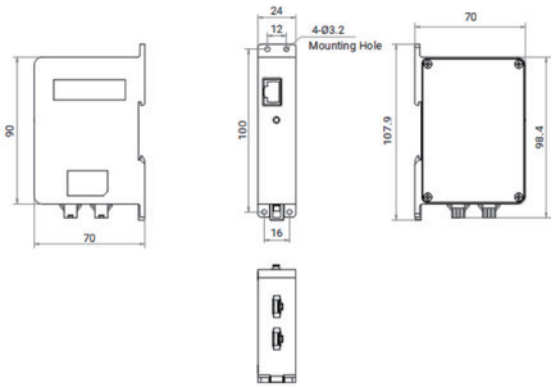
Model	MV-LE100-24W24-2	MV-LE100-24W24-2T-PoE	MV-LE100-48W24-2	MV-LE100-60W24-4D	MV-LE100-120W24-4	MV-LE100-200W24-2BD	MV-LE100-500W24-1ED
Applicable product	Ring light, bar light, flat light, coaxial light, etc.					Ring light, bar light, flat light, coaxial light, etc. Applicable light interface: 12M-2A	Flat dome light Applicable light interface: 19M-2A
Input voltage	20 VDC to 24 VDC	37 VDC to 57 VDC (provides power via PoE)	24 VDC	100 VAC to 240 VAC, 50 Hz/60 Hz		100 VAC to 240 VAC, 50 Hz/60 Hz	
Input current	1.5 A	0.5 A to 0.7 A	2.5 A	1.8 A (115 VAC) 1 A (230 VAC)	2.1 A (115 VAC) 1.2 A (230 VAC)	1.8 A (115 VAC) 1 A (230 VAC)	5 A (115 VAC) 2.5 A (230 VAC)
Output voltage	24 VDC	24 VDC	24 VDC				
Output current	Max. 1 A	Max. 0.8 A	Max. 2 A	Max. 2.5 A	Max. 5 A	Max. 8.4 A	Max. 18 A
Output power	Max. 24 W	Max. 20 W	Max. 48 W	Max. 60 W	Max. 120 W	Max. 200 W	Max. 432 W
Output current for each channel	Max. 0.5 A	Max. 0.8 A	Max. 1 A	Max. 1.2 A	Max. 3 A	Max. 6 A	Max. 18 A
Trigger in	High level 4.5 VDC to 24 VDC, low level 0 VDC to 2 VDC	Not support	High level 4.5 VDC to 24 VDC, low level 0 VDC to 2 VDC				
Power supply interface	3.5 mm × 2 terminal blocks	RJ45	5.08 mm × 2 terminal blocks	C13 220 VAC interface		C13 220 VAC interface	
Digital I/O	Opto-isolated input × 2	Not support	Opto-isolated input × 2	Opto-isolated input × 4		Opto-isolated input × 2	Opto-isolated input × 1
Lighting output connector	SMR-03V-BC	SMR-03V-BC	SMR-03V-BC			12M-2F	19M-2H
Dimension	24 mm × 70 mm × 106 mm (0.9" × 2.8" × 4.2")	24 mm × 70 mm × 106 mm (0.9" × 2.8" × 4.2")	90 mm × 63.2 mm × 139.5 mm (3.5" × 2.5" × 5.5")	130 mm × 92.9 mm × 169.5 mm (5.1" × 3.7" × 6.7")		130 mm × 92.9 mm × 169.5 mm (5.1" × 3.7" × 6.7")	347.6 mm × 180 mm × 150.8 mm (13.7" × 7.1" × 5.9")
Shell material	Plastic	Aluminum alloy	Plastic				
Weight	Approx.162 g (0.4 lb.)	Approx.150 g (0.3 lb.)	Approx. 235 g (0.5 lb.)	Approx. 700 g (1.5 lb.)	Approx. 795 g (1.8 lb.)	Approx. 820 g (1.8 lb.)	Approx. 4.4 kg (9.7 lb.)
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)						
Humidity	20% RH to 85% RH (no condensation)						
Ingress protection	IP30						
Cooling mode	Natural cooling		Fan cooling				
Certification	CE, KC						

Dimension

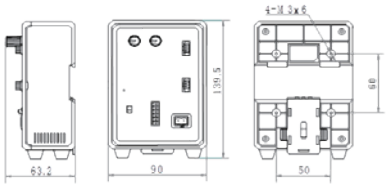
MV-LE100-24W24-2



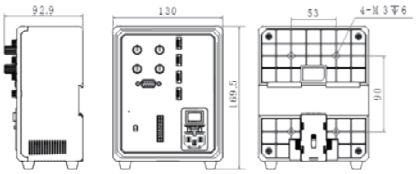
MV-LE100-24W24-2T-PoE



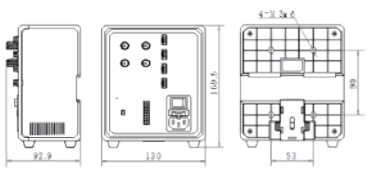
MV-LE100-48W24-2



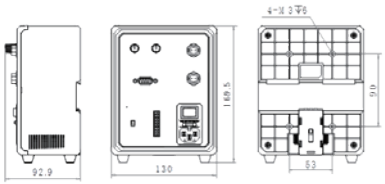
MV-LE100-60W24-4D



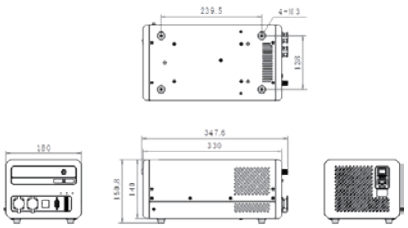
MV-LE100-120W24-4



MV-LE100-200W24-2BD



MV-LE100-500W24-1ED



Unit:mm

Digital Light Controller (Generic)

Hikrobot Style Digital Constant Voltage Light Controller
MV-LE200-*W24 Series

Introduction

MV-LE200-*W24 digital constant voltage light controller supports various dimming modes and multi-channel light output. It provides flexible I/O connectors, device management interface, and corresponding light source controller software, helping users realize quick deployment of machine vision light source on site.



Key Features

- Supports different control modes of light brightness, including control panel and software.
- Supports parameter configuration and device management via serial ports or network interfaces.
- Provides multi-channel input and output, and flexible signal linkage.
- Adopts industrial design and supports installation via guide rail or screw hole.
- Supports overcurrent, overload, and short circuit protection.

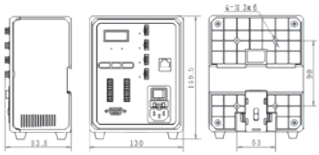
Specification

Model	MV-LE200-200W24-4TD	MV-LE200-120W24-4TD	MV-LE200-90W24-6D	MV-LE200-48W24-2D
Drive mode	Digital, constant voltage			
Lighting mode	Continuous, strobe			
PWM frequency	125 kHz			
Flash output	Not supported			
Channel	4-channel		6-channel	2-channel
Dimming mode	Control panel (button), software (serial port or network interface)		Control panel (button), software (serial port)	
Brightness level	0 ~ 255			
Lighting response time	< 10 μs			
Trigger mode	External trigger and internal trigger			
Communication protocol	UDP, Serial		Serial	
Applicable product	Ring light, bar light, flat light, coaxial light, etc.			
Input voltage	100 VAC to 240 VAC, 50 Hz/60 Hz		24 VDC	
Input current	1.8 A (115VAC) 1 A (230VAC)	2.1 A (115VAC) 1.2 A (230VAC)	4.7 A	2.5 A
Output voltage	24 VDC			
Output current	Max. 8.3 A	Max. 5 A	Max. 3.75 A	Max. 2 A
Output power	Max. 200 W	Max. 120 W	Max. 90 W	Max. 48 W
Output current for each channel	Max. 3 A			Max. 2 A
Trigger in	High level 4.5 VDC to 24 VDC, low level 0 VDC to 2 VDC			
Trigger out	High level 10 VDC to 24 VDC, low level 0 VDC to 2 VDC			
Power supply interface	C13 220 VAC interface		5.08 mm × 2 terminal blocks	
Console interface	RJ45 network interface, DB9F serial port		DB9F serial port	
Digital I/O	Opto-isolated input × 4, opto-isolated output × 4		Opto-isolated input × 6 opto-isolated output × 2	Opto-isolated input × 2 opto-isolated output × 2
Lighting output connector	SMR-03V-BC			
Dimension	130 mm × 83.8 mm × 169.5 mm (5.1" × 3.3" × 6.7")		90 mm × 54.1 mm × 139.5 mm (3.5" × 2.1" × 5.5")	
Shell material	Plastic			

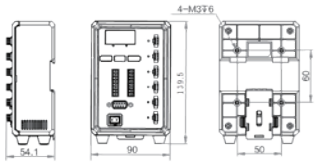
Model	MV-LE200-200W24-4TD	MV-LE200-120W24-4TD	MV-LE200-90W24-6D	MV-LE200-48W24-2D
Weight	Approx. 733 g (1.6 lb.)		Approx. 205 g (0.5 lb.)	Approx. 188 g (0.4 lb.)
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)			
Humidity	20% RH to 85% RH (no condensation)			
Ingress protection	IP30			
Cooling mode	Fan cooling		Natural cooling	
Certification	CE, KC			

Dimension

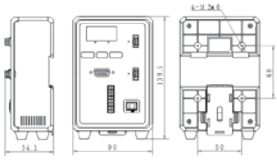
MV-LE200-200W24-4TD &
MV-LE200-120W24-4TD



MV-LE200-90W24-6D



MV-LE200-90W24-6D



Unit:mm

PCIe Board Type Light Controller

Hikrobot Style MV-LE200-*W24-*-PCIE Board Type Light Controller

Introduction

MV-LE200-*W24-*-PCIE board type light controller adopts mode switching of digital constant voltage and analog constant voltage, supports power supply via device main board and ATX power (simultaneously), and provides multiple light source outputs and I/O trigger interfaces. With flexible device management and parameter configuration via PCIe interface, and client software trigger support, it is applicable to high-efficiency deployment of light source systems.



Key Features

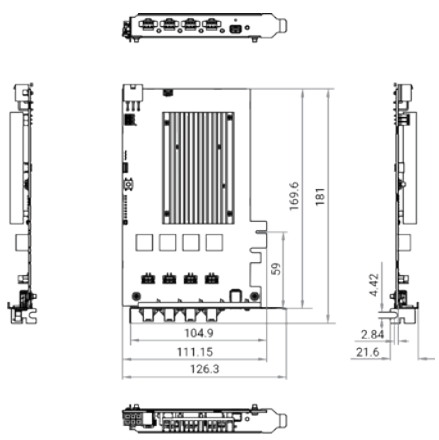
- Adopts PCIe × 1 interface, which is compatible to PCIe × 4/8/16 slots, to ease the installation space of the device compared with conventional light controllers.
- Supports PWM mode or analog output.
- Supports power supply from main board via PCIe interface, which is compatible to most industrial PCs.
- Realizes linked signal control with multiple light source outputs and I/O trigger interfaces.
- Rich in functions and easy to use with client software.

Specification

Model	MV-LE200-48W24-4-PCIE
Drive mode	Supports mode switching of digital constant voltage and analog constant voltage
Lighting mode	Continuous, strobe
PWM frequency	125 kHz
Flash output	Not support
Channel	4-channel
Dimming mode	Software (client)
Brightness level	0 to 255
Lighting response time	< 5 ms
Trigger mode	External trigger and internal trigger
Communication protocol	Serial
Applicable product	Ring light, bar light, flat light, coaxial light, etc (with power less than 24 W)
Interconnect	PCIe gen2 x 1
Bus indicator	1
Input voltage	12 VDC
Input current	4.2 A
Output voltage	24 VDC
Output current	Max. 1.75 A
Output power	Max. 42 W
Output current for each channel	Max. 1 A
Trigger in	High level 4.5 VDC to 24 VDC, low level 0 VDC to 2 VDC
Trigger out	High level 10 VDC to 24 VDC, low level 0 VDC to 2 VDC
Power supply interface	ATX power supply interface
Digital I/O	Opto-isolated input × 4
Lighting output connector	SMR-03V-BC
Dimension	181 mm × 126.3 mm × 21.6 mm (7.1" × 5.0" × 0.9")
Weight	Approx. 212 g (0.5 lb.)
Temperature	Working temperature: 0 °C to 50 °C (32 °F to 122 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)
Humidity	20% RH to 85% RH (no condensation)
Cooling mode	Natural cooling
Certification	CE, KC

Dimension

MV-LE200-xW24-PCIE



Unit:mm

Digital Light Controller (Line-Scan Light)

Hikrobot Style Line-Scan Light Controller
MV-LE201-*W48 Series



Introduction

MV-LE201-*W48 line-scan light controller supports various dimming modes using variable currents. It adopts control panel buttons and a display to provide communication through serial port or network interface. It boasts stable performance and flexible features, helping users realize quick deployment of machine vision light source on site.

Key Features

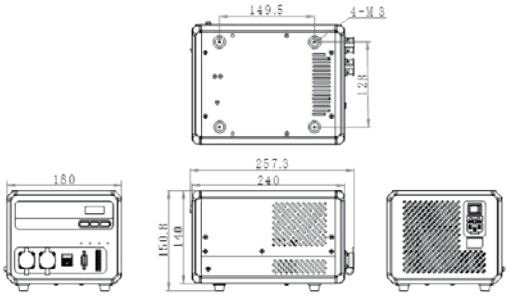
- Adopts constant current to improve the lighting stability of light source, and the Max. total power output reaches 2400 W.
- Adopts buttons and a display to realize quick search and light output setting.
- Supports parameter configuration and device management via serial ports.
- Supports external trigger interface for continuous or strobe lighting modes.
- Supports overcurrent, overload, and short circuit protection.

Specification

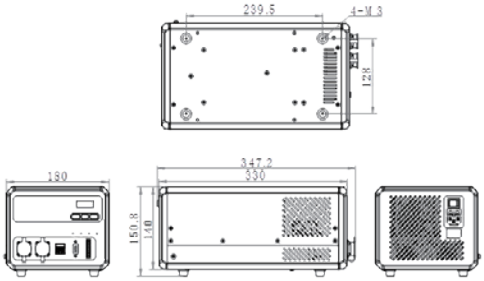
Model	MV-LE201-200W48-2TD	MV-LE201-500W48-2TD	MV-LE201-750W48-2TD
Drive mode	Digital, constant current		
Lighting mode	Continuous, strobe		
Channel	2-channel		
Dimming mode	Control panel (button), software (serial port or network interface)		
Brightness level	0 to 255		
Lighting response time	< 10 μs		
Trigger mode	External trigger and internal trigger		
Communication protocol	UDP, Serial		
Applicable product	Line-scan light		
Input voltage	100 VAC to 240 VAC, 50 Hz/60 Hz		
Input current	1.8 A (115 VAC) 1 A (230 VAC)	5.3 A (115 VAC) 2.65 A (230 VAC)	8.2 A (115 VAC) 3.9 A (230 VAC)
Output voltage	48 VDC		
Output current	Max. 4 A	Max. 10 A	Max. 15 A
Output power	Max. 200 W	Max. 500 W	Max. 750 W
Output current for each channel	Max. 4 A	Max. 8 A	
Trigger in	High level 4.5 VDC to 24 VDC, low level 0 VDC to 2 VDC		
Trigger out	High level 10 VDC to 24 VDC, low level 0 VDC to 2 VDC		
Power supply interface	C13 220 VAC interface		
Console interface	RJ45 network interface, DB9F serial port		
Digital I/O	Opto-isolated input × 2, opto-isolated output × 2		
Lighting output connector	19M-8H (female)		
Dimension	257.3 mm × 180 mm × 150.8 mm (10.1" ×7.1" × 5.9")	347.2 mm × 180 mm × 150.8 mm (13.7" × 7.1" × 5.9")	
Shell material	Plastic + SECC		
Weight	2070 g (4.6 lb.)	5000 g (11.0 lb.)	5300 g (11.7 lb.)
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)		
Humidity	20% RH to 85% RH (no condensation)		
Ingress protection	IP30		
Cooling mode	Fan cooling		
Certification	CE, KC		

Dimension

MV-LE201-200W48-2TD



MV-LE201-500W48-2TD & MV-LE201-750W48-2TD



Unit:mm

Digital Light Controller (Spot Light)

Hikrobot Style Spot Light Controller MV-LE201-*W5 Series

Introduction

MV-LE201-*W5 spot light controller supports various dimming modes using variable currents. It adopts control panel buttons and a display to provide communication through serial port or network interface. It boasts stable performance and flexible features, helping users realize quick deployment of machine vision light source on site.



Key Features

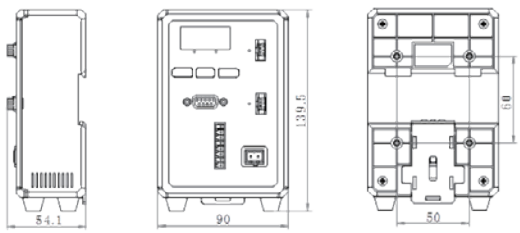
- Adopts constant current to improve the lighting stability of light source.
- Adopts buttons and a display to realize quick search and light output setting.
- Supports parameter configuration and device management via serial ports.
- Supports external trigger interface for continuous or strobe lighting modes.
- Supports overcurrent, overload, and short circuit protection.

Specification

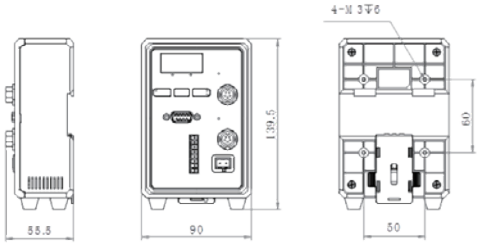
Model	MV-LE201-10W5-2D	MV-LE201-30W5-2FD
Drive mode	Digital, constant current	
Lighting mode	Continuous, strobe	
Channel	2-channel	
Dimming mode	Control panel (button), software (serial port)	
Brightness level	0 ~ 255	
Lighting response time	< 10 μs	< 30 μs
Trigger mode	External trigger and internal trigger	
Communication protocol	Serial	
Applicable product	Spot light	
Input voltage	24 VDC	
Input current	0.5 A/24 VDC	1.5 A/24 VDC
Output voltage	5 VDC	
Output current	Max. 2 A	Max. 3 A
Output power	Max. 10 W	Max. 30 W
Output current for each channel	Max. 1 A	Max. 3 A
Trigger in	High level 4.5 VDC to 24 VDC, low level 0 VDC to 2 VDC	
Trigger out	High level 10 VDC to 24 VDC, low level 0 VDC to 2 VDC	
Power supply interface	24 VDC terminal block	
Console interface	DB9F serial port	
Digital I/O	Opto-isolated input × 2, opto-isolated output × 2	
Lighting output connector	SMR-03V-BC (female)	12M-5F (female)
Dimension	139.5 mm × 90 mm × 54.1 mm (5.5" ×3.5" × 2.1")	139.5 mm × 90 mm × 55.5 mm (5.5" ×3.5" × 2.2")
Shell material	Plastic	
Weight	240 g (0.53 lb.)	300 g (0.66 lb.)
Temperature	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: –20 °C to 60 °C (–4 °F to 140 °F)	
Humidity	20% RH to 85% RH (no condensation)	
Ingress protection	IP30	
Cooling mode	Natural cooling	Fan cooling
Certification	CE, KC	

Dimension

MV-LE201-10W5-2D



MV-LE201-30W5-2FD



Unit:mm

Light Source Accessories

Hikrobot Style Light Source Extension Cables Series

Introduction

Special light source extension cables for Hikrobot style light source series.



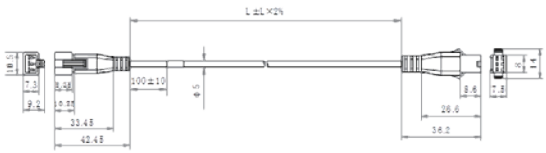
Specification

Model	MV-LW-H-0**-1-S	MV-LW-H-0**-1-19M8A	MV-LW-H-0**-1-12M5A
Channel	1-channel	1-channel	1-channel
End A connector	SMR-03V-B	19M-8A	12M-5A (Female)
End B connector	SMR-03V-BC	19M-8A	12M-5K (Male)
Length	1/3/5/7/10/15/20/30 m	1/3/5/10/15/30 m	3 m
Cable diameter	Φ5 mm	φ8.75 mm	Φ5.2 mm
Cable jacket	PVC	PVC	PVC
Max. U-type bending cycles	5 million times	/	5 million times
Max. ±90° bending cycles	/	2 million times	/
Min. bending radius	60 mm	105 mm	62.4 mm
Connector durability	2000 times	500 times	500 times
Flame resistance rating	VW-1	VW-1	VW-1
Insulation	≥20 MΩ/KM	≥10 MΩ/KM	≥10 MΩ/KM
Withstand voltage capability	30 V	300 V	500 V
Temperature	Working temperature: 0 °C to 80 °C (32 °F to 176 °F) Storage temperature: –20 °C to 80 °C (–4 °F to 176 °F)	Working temperature: 0 °C to 80 °C (32 °F to 176 °F) Storage temperature: –20 °C to 80 °C (–4 °F to 176 °F)	Working temperature: 0 °C to 80 °C (32 °F to 176 °F) Storage temperature: –20 °C to 80 °C (–4 °F to 176 °F)
Humidity	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)	20% RH to 90% RH (no condensation)
Ingress protection	IP55 (under proper installation)	IP55 (under proper installation)	IP55 (under proper installation)
Certification	RoHS 2.0	RoHS 2.0	RoHS 2.0

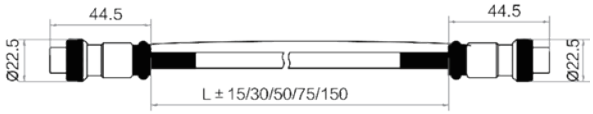


Dimension

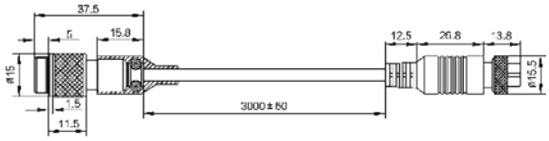
MV-LW-H-0**-1-S



MV-LW-H-0**-1-19M8A



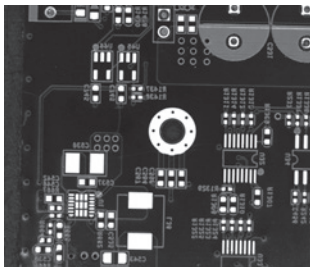
MV-LW-H-0**-1-12M5A



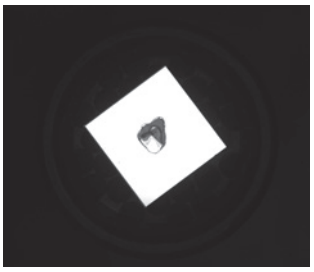
Unit:mm

Application Cases

Consumer Electronics



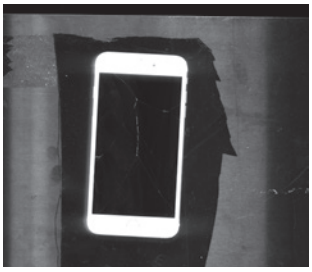
PCB mark point detection



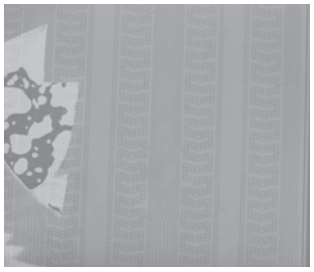
Optical filter contour detection



Phone cover laser engraving detection



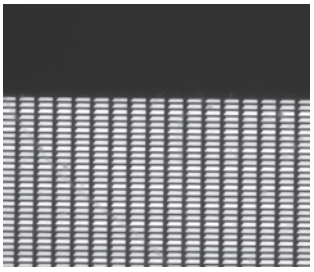
Phone screen scratch detection



Phone screen defect detection



Hole and notch detection of phone metal plate



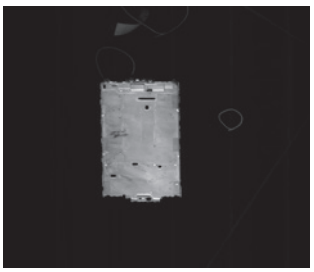
Display pixel position detection



Phone charging port position detection



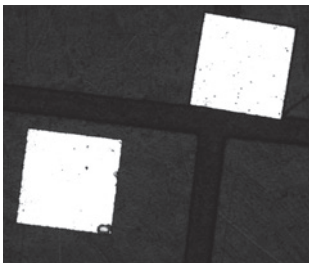
Phone frame inner dimension detection



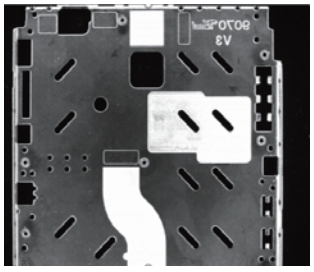
Phone plate screw hole thread presence detection



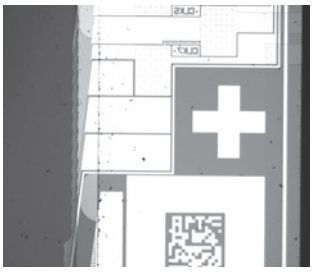
Phone inner screen 2D code detection



Chip surface pit detection

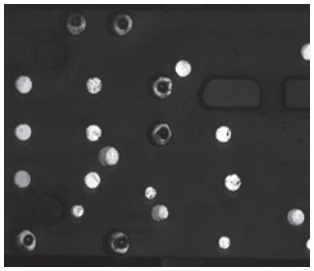


Phone rack screw hole positioning

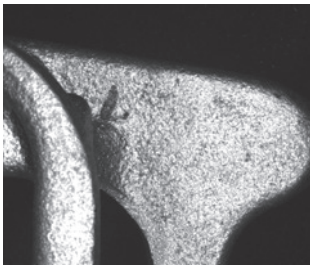


Phone screen mark point detection

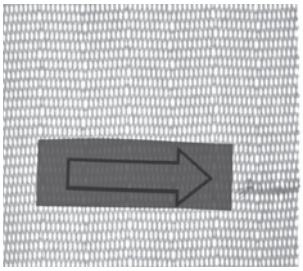
Automotive



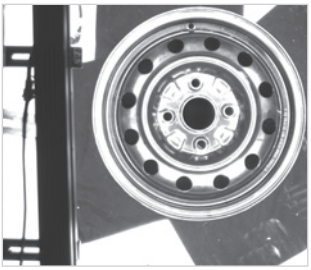
Through hole number and dimension detection



Casting defect detection



Seat belt defect detection



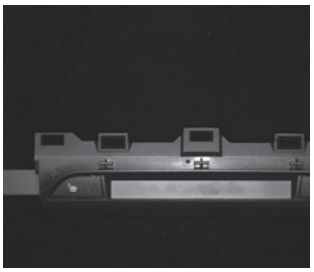
Wheel hub surface stain detection and dimension detection



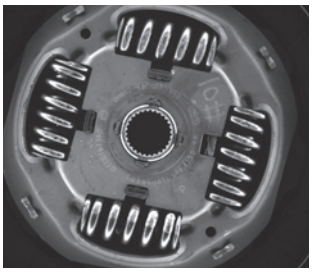
Auto logo dimension detection



Hole location and dimension detection



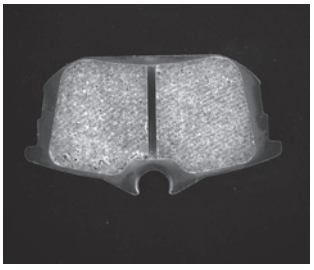
Air conditioner panel character inspection



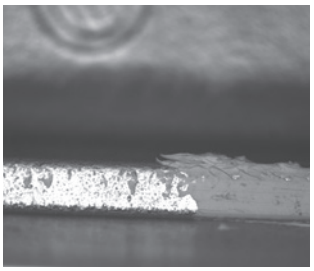
Small spring presence detection in large spring



Brake surface character inspection



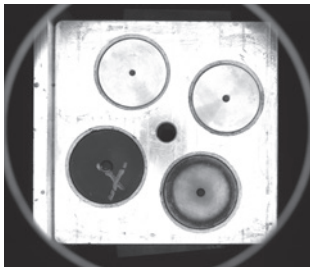
Brake contour detection



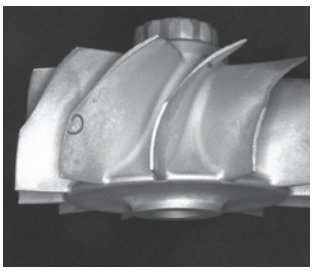
Glue stickiness detection



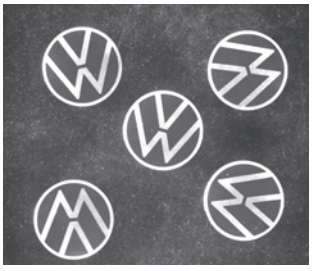
Piston defect detection and dimension detection



Valve presence detection and dimension detection

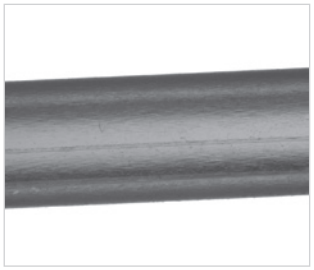


Turbine defect detection



Auto logo inspection

Medicine



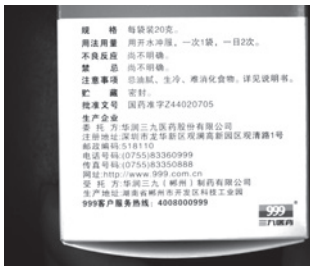
Tube type detection



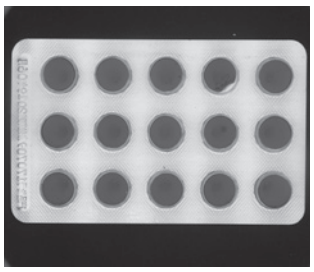
Tube dimension detection



Needle dimension detection



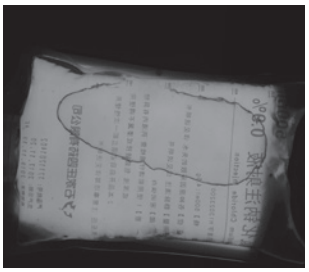
Medicine package character detection



Medicine defect detection



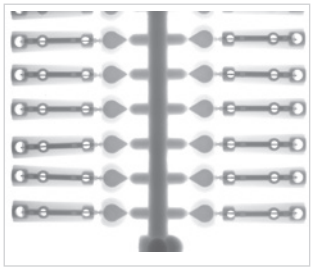
Medicine impurity detection



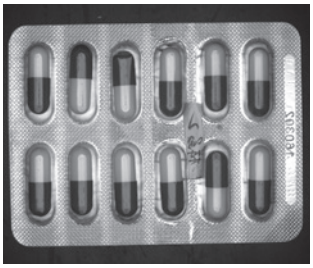
Transparent plastic bottle character detection



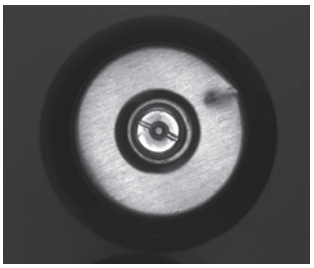
Bottle cap character detection



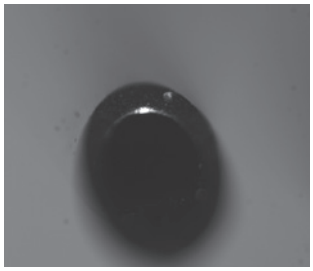
Glucometer needle presence detection



Capsule damage detection

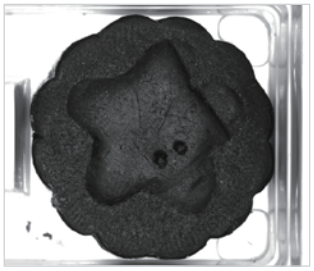


Oral liquid bottle cap defect detection



Needle point shape detection

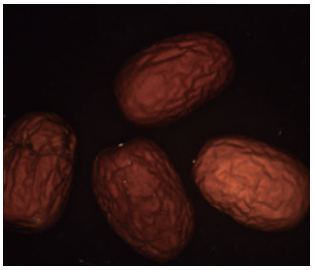
Food



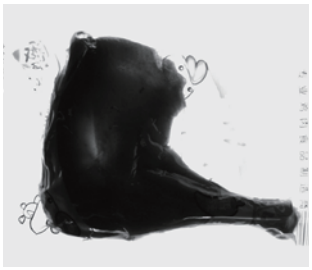
Moon cake position detection



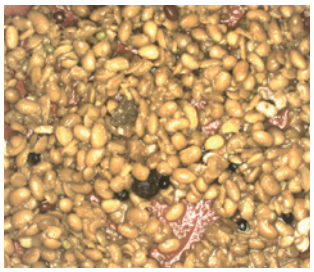
Chewing gum presence detection



Red date color difference detection



Chicken leg size detection



Thick broad-bean sauce impurity detection

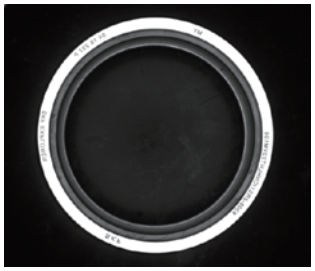


Instant noodle foreign object detection

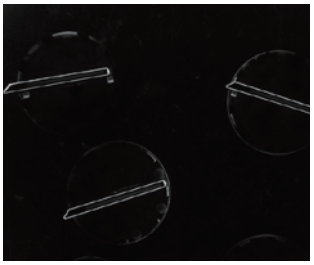
Metals



Drill angle detection



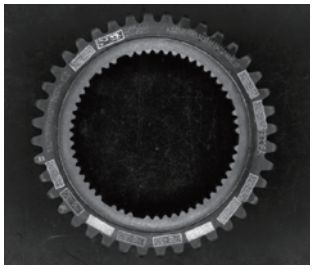
Bearing character detection



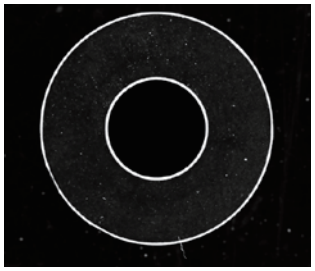
Metal insert position detection



Needle dimension detection



Gear tooth space width barcode detection



Metal tube center coincidence detection and dimension detection

Tobacco



Lighter barcode detectio



Cigarette tin cover character stamping detection



Cigarette package steal stamping detection



Cigarette package number detection



Cigarette package surface scratch detection



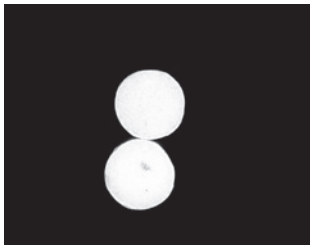
Cigarette package surface character defect detection



Cigarette package contour detection



Cigarette packaging paper surface defect detection

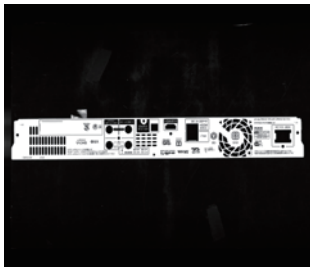


Cigarette stain detection

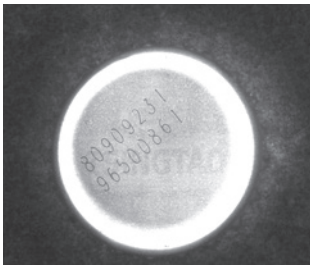


Cigarette size detection

Printing



DVD player surface printing inspection



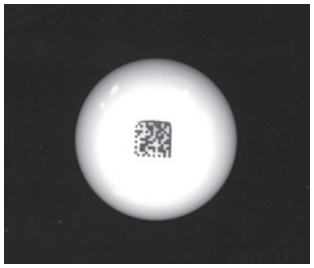
Production date detection on bottle caps



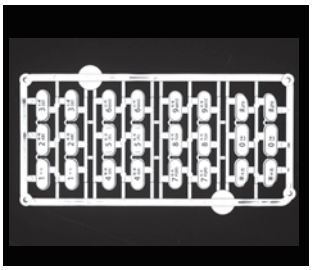
Package printing inspection



Cosmetic logo and label detection



Plastic ball 2D code detection



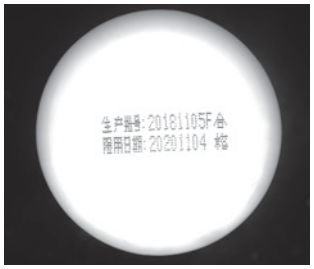
Phone keypad character detection



2D code detection on plastic caps



Character and barcode detection on boxes



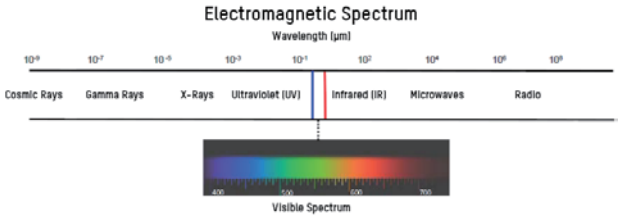
Production date detection at the bottom of cosmetic bottles

Appendix

Optical Basics

Light

Light refers to the electromagnetic wave that can give off a certain range of wavelengths.

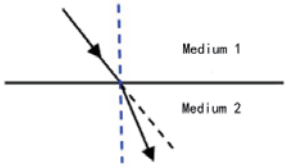


Rectilinear Propagation of Light

In the same uniform medium, light travels in a line, which is the rectilinear propagation of light. Usually, a line with an arrow at the end is used to show the travel path and direction of light, which is called a ray of light.

Refraction

When the light travels with a tilt from one transparent medium to another transparent medium, the travel direction is changed, and this phenomenon is called refraction.



Luminous Flux

Luminous flux is the radiation power that can be sensed by the human eye, which is equal to the product of the radiation energy of a certain wave band in a unit time and the relative vision rate of the wave band. The relative vision rate of the human eye (namely the sensor) to different wavelengths of light is different, so when the radiation power of different wavelengths of light is equal, the luminous flux is not equal.
The unit of luminous flux is lm (lumen). One lumen is equal to the luminous flux emitted by a spot light with a uniform luminous intensity of 1 cd (candela) in a 1sr (steradian) solid angle. In other word, 1 lm = 1 cd·sr. To draw an analogy in mechanics, luminous flux is similar to pressure, and luminous intensity is similar to pressure intensity. If you want the illuminated spot looks brighter, you should not only raise the luminous flux (the amount of lm), but also concentrate the light, which reduces the illuminated area (the amount of sr), and then you can get greater luminous intensity (the amount of cd).

Luminous Intensity

The international unit of luminous intensity is cd (candela). One cd equals 1000 mcd, and it is the luminous flux of a single-color spot light in one unit of solid angle in the specified direction. Luminous intensity indicates the transmission concentration of light in the space.

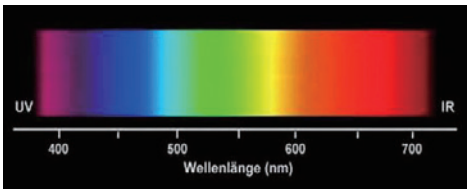
Illuminance

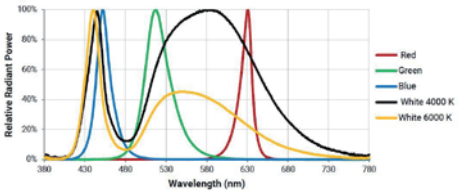
Illuminance refers to the luminous flux of light in one unit of area. Its unit is Lex/Lx. Used to indicate the degree of illumination on the surface of objects.

Color/Wavelength

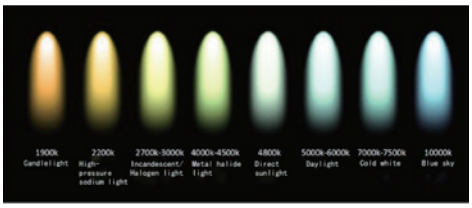
Light with the wavelength between 380 nm to 760 nm can be sensed by the human eye, which is called visible light, and each color in the visible light corresponds to a wavelength. If the wavelength of light is less than 400 nm, it is ultraviolet light; If the wavelength of light is greater than 780 nm, it is infrared light.
All colors in the world that we can see is composed by the absorption or reflection of the mixture of blue, green, and red lights in appropriate proportions. Blue, green, and red are the basic elements of all colors, and they are therefore called the three primary colors.

The wavelengths of the three primary colors:
435.8nm. Blue light range: 400 nm to 500 nm.
546.1nm. Green light range: 500 nm to 600 nm.
700 nm. Red light range: 600 nm to 700 nm.
Each of the three primary colors takes up one third of the spectrum of visible light. A mixture of two or three of the three primary colors forms other colors.
Some lights in the spectrum do not have a single wavelength, but are mixtures of lights of different intensities and wavelengths. However, human eyes cannot distinguish between mixed lights and single-color lights. For example, red and green lights can mix together to form an orange light, but human eyes cannot tell this mixed orange light from single-color orange light whose wavelength is 600 nm.





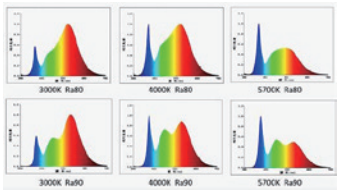
Color Temperature

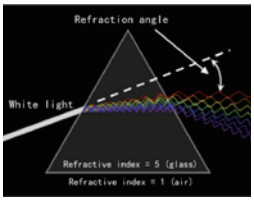


Color temperature refers to the spectrum of the light. Theoretically, color temperature is the color change of a blackbody heating from absolute zero (–273°C). When a blackbody is heating up, its color changes from black to red, then to yellow, to white, and finally blue. The spectrum of the light given off by the blackbody is called the color temperature (unit: K/Kelvin). Lower K means redder light. As the K goes higher, the red turns to yellow, white, and blue. Some color temperatures in common scenes: incandescent lamp and halogen lamp: 2500 K to 3000 K; direct sunlight: 4800 K; daylight: 5600 K; cloudy daylight or cold while light: 6000 K to 7500 K; blue sky light: 10,000 K.

Color Rendering

Color rendering refers to the different presented colors when lights of different spectrum illuminate objects of the same color. Usually, color rendering index (CRI/Ra) is used to indicate color rendering of light. Lights that can show the original color of objects have high Ra. As Ra approaches 100, the illumination effect gets closer to natural light effect, which means better color rendering, and lower Ra means worse color rendering of objects.

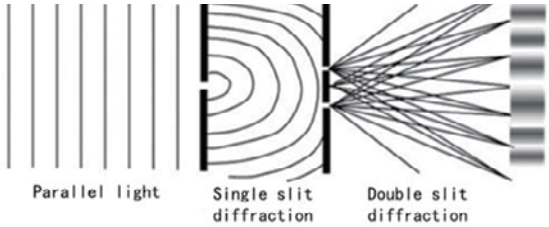


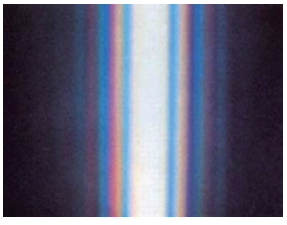


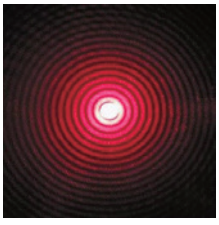
Lights of different wavelengths have different refraction angle

Diffraction

When light encounter opaque or transparent obstacles or holes/gaps during its travel, it will bypass the obstacle and deviates from the linear light path, which is called diffraction. The light and dark streaks or rings produced by diffraction are diffraction patterns. Diffraction is a unique phenomenon of waves, and all waves can be diffracted.

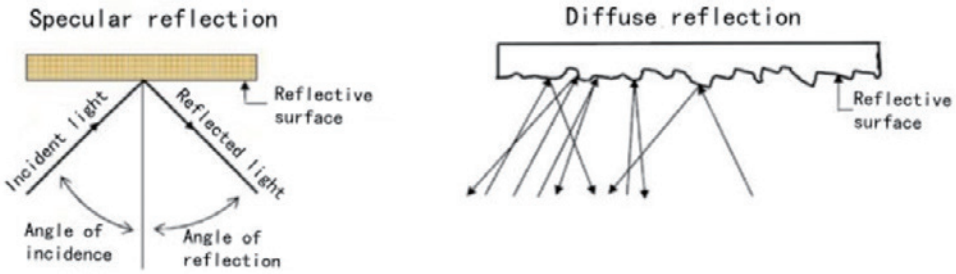






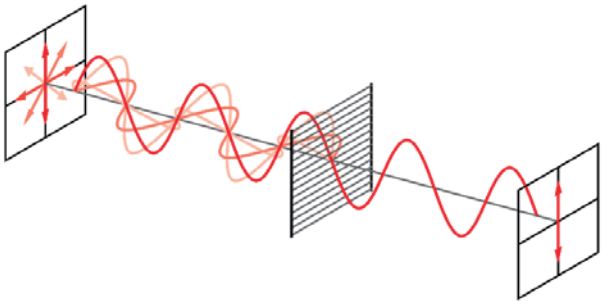
Reflection

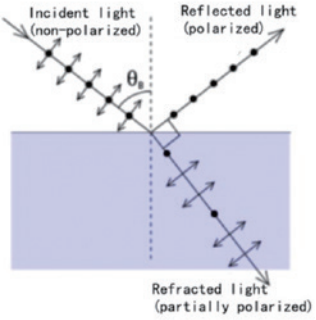
Diffuse reflection refers to the phenomenon of sound waves, light waves, or other electromagnetic waves encountering the interface to another medium while still partially or completely propagating in the original medium. Light is reflected from the surface without changing the wavelength. The reflection can be a specular reflection if it encounters a smooth surface; or it can be diffuse reflection if it encounters a rough surface.



Polarization

Light is electromagnetic wave, and electromagnetic wave is a kind of transverse wave.
A feature of transverse wave is that, its vibrations are polarized. In the plane perpendicular to the travel direction, the wave can vibrate in either direction. Generally, the vibration direction of the electric field of light is taken as the vibration direction of the light. If a beam of light all vibrates in the same direction, it is called polarized light, or more strictly, fully polarized light. Usually, natural light vibration is evenly distributed in all directions, so it is not polarized light. However, a smooth, non-metallic surface reflects polarized light at a certain angle, namely the Brewster's angle (related to the refractive index of the substance). If the angle deviates from Brewster's angle, some non-polarized light will be mixed in with the polarized light. This kind of light is called partially polarized light. Partially polarized light is a mixture, so larger deviation angle means less polarized light. If the deviation is large enough, the light will turn to non-polarized light.

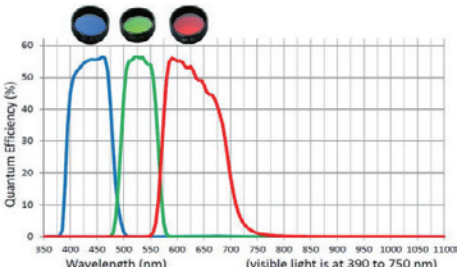




Lens Filter

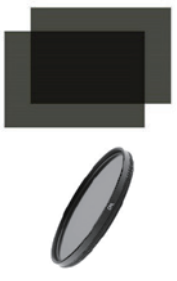
Lens filter is an accessory fitted under a lens to filter light. It allows only certain wavelengths of light to go through. Common lens filters include monochromatic band-pass filters, visible light band-pass (cutoff/high pass/low pass) filters, infrared band-pass filters, and ultraviolet band-pass filters.





Polarizer

Polarizer is an artificial thin film. It is made by regularly arranging crystal particles with strong selective absorption in a transparent adhesive layer, which allows the light that vibrates in a certain electric vector direction, which is called the polarization direction, to go through, and absorbs the light that vibrates perpendicularly to it. In other words, it has dichroism. Therefore, when natural light passes through the polarizer, the transmitted light basically becomes plane polarized light. Polarizers are easy to make and widely used. By adjusting the direction of the two polarizers, some strong reflections can be filtered out.



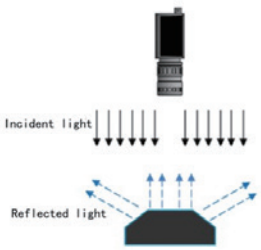
Glossary

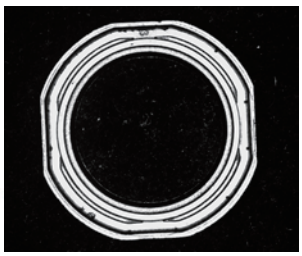
Front Light

The light source is above the object, and the light illuminates surface of the object. Based on the beam angle, front light can be divided into high-angle light, low-angle light , and shadowless light including high-angle and low-angle beams.

High-Angle Light

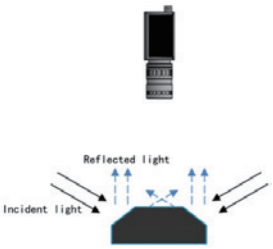
Beam path: The angle between the beams and the horizontal plane is greater than 45°.
Effect analysis: When the light angle is high, the beams reflected by the flat part of the object enter the lens, so this part has high gray value in the image; the beams reflected by the rough part of the object cannot enter the lens, so this part has low gray value in the image.
Application: Positioning, character inspection, contour detection, scratch detection, and dimension inspection.
Common light sources: High-angle ring light, bar light, flat light, coaxial light, and spot light.

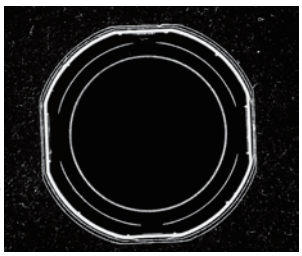




Low-Angle Light

Beam path: The angle between the beams and the horizontal plane is smaller than 45°.
Effect analysis: When the light angle is low, the beams reflected by the flat part of the object cannot enter the lens, so this part has low gray value in the image; the beams reflected by the rough part of the object enter the lens, so this part has high gray value in the image.
Application: Positioning, character inspection, contour detection, scratch detection, and dimension inspection.
Common light sources: Low-angle ring light, bar light, and line-scan light.

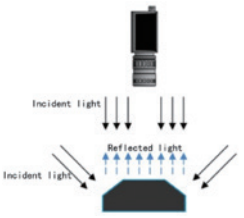




Shadowless Light

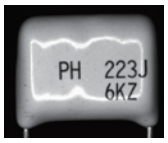
Beam path: The beam path is changed by a mechanical or diffuse plate, so the final light include beams from the high angle and the low angle.

Effect analysis: Shadowless light has the effect of both the high-angle light and the low-angle light, illuminating the object from all angles. Therefore, the grains and creases on the surface of the object are weakened, and the image is uniform.
Application: Positioning, dimension detection, arc-shaped product detection.
Common light sources: Dome light, shadowless ring light, shadowless square light, and light box.





Capacitor



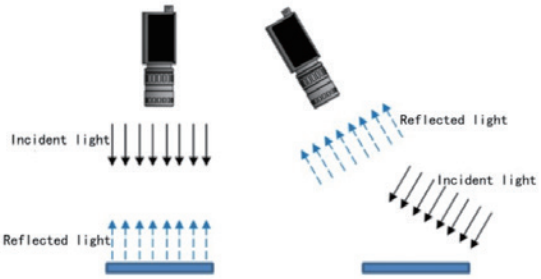
Ring Light
Not Uniform



Shadowless Light
Uniform

Coaxial Light

Beam path: The reflected light is parallel with the lens.
Effect analysis: The incident light is reflected by a flat surface, and then the reflected light parallel with the incident light axis enters the lens. In this case, the object is equivalent to a mirror, and the acquired image displays the light information. When the mirror, namely the object, is rough, you can clearly see the rough part in the image.
Application: Detection of scratch, indentation, bumps and hollows, and contour.
Common light sources: Coaxial light, coaxial parallel light, flat light, and line-scan light.



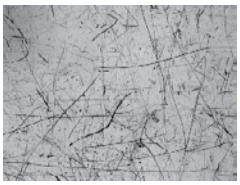
With a Telecentric Lens



Scratches on Adapter



Coaxial Light



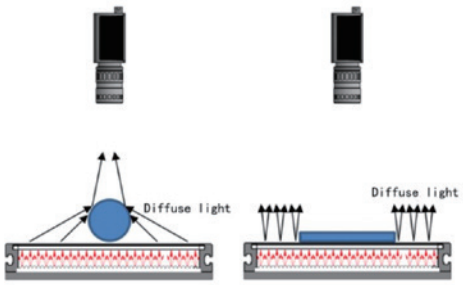
Coaxial Parallel Light

Backlight

The light source is below the object. If the object is removed, the light goes directly into the lens, so the image gray value will be high; if the object is put to block the light, the image gray value will be low, and the contour information of the object is acquired.

Diffuse Backlight

Beam path: The light given off by the light source is scattered by the diffuse plate.
Effect analysis: When performing a contour extraction, the contour of thick products with arcs has fuzzy edges and lacks sharpness, while the contour of flat products can be clearly extracted with high cost-effectiveness.
Application: Positioning, dimension detection, presence detection, and defect detection.
Common light sources: Backlight.







Parallel Backlight

Beam path: The light source gives off parallel light through a parallel mechanical.
Effect analysis: Parallel light can accurately acquire the contour of objects with irregular shapes, such as products in the shape of a cylinder or products with chamfers or rounded corners. The edges can be clearly extracted in the image. Parallel light is usually used with telecentric lens, and this combination has high precision.
Application: Dimension detection.
Common light sources: Parallel flat light and coaxial parallel light.



Diffuse Backlight

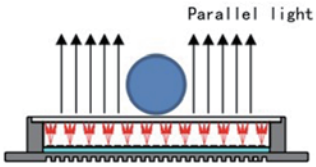


Parallel Backlight



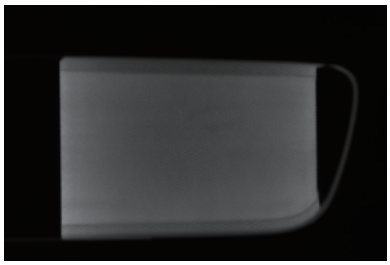
Detail comparison





Mechanical Light

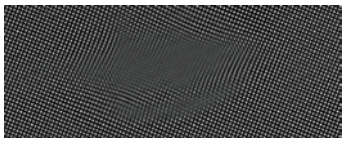
Beam path: The light source gives off clear line array or spot array through a special mechanical.
Effect analysis: When the light illuminates the object, the defects twist the light array pattern.
Application: Flatness checking.
Common light sources: Mechanical light.



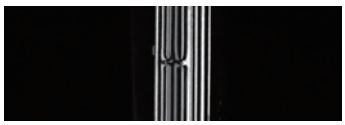
Rearview Mirror Flatness Checking



Phone Middle Bezel Defect Detection



Rearview Mirror Flatness Details



Phone Middle Bezel Defect Details

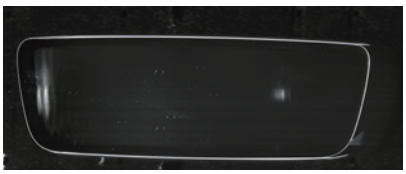
Brightfield

The background has high gray value while the feature has low gray value.



Darkfield

The background has low gray value while the feature has high gray value.



Color Casting

Based on the color of the object, extract corresponding wavelength to improve contrast. There are usually two ways to do it:

- Use contrasting colors (such as red and blue).
- Use white light with single band-pass filters.



Original Color



Under Red Light



Under Blue Light



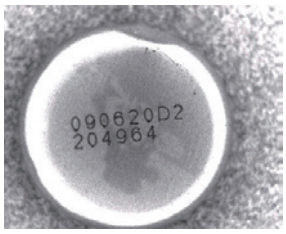
Under Green Light

Infrared Light

The strong penetration of infrared light can filter the macromolecule interference on the surface of the object.



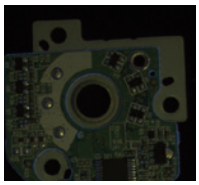
Under Visible Light



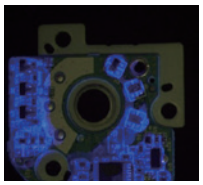
Under Infrared Light

Ultraviolet light

The fluorescence effect of ultraviolet light can be used to detect UV glue and invisible code. In contrast to infrared light, it has weak penetration and can detect invisible features in transparent objects.



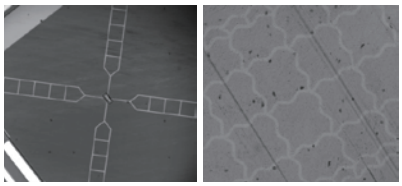
Under Visible Light



Under Ultraviolet Light



Invisible Code Detection on Bottle Cap



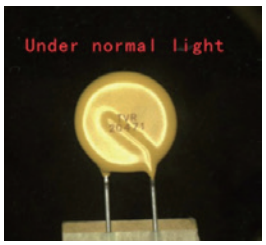
ITO Detection on Glass

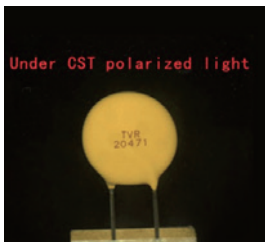
Polarized light

Used to offset some reflected lights.









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