

# 24-V Red LED Light Units

## RD2 Lineup

Standard Red Light Units Changed to 24 V



# Standard Red Light Units Unified to 24 V

The Standard Red Light Units have been renewed and “RD” was changed to “RD2” in the model names.

\*There are some Standard Red Light Units for which the model name does not include “RD.”

For details, refer to the comparison of the specifications of the previous models and the new models on page 3.

## Feature 1 High-quality LEDs

Quality has been improved with the use of long-life four-element LEDs. The slower degradation in brightness provides a longer period of reliable application.

Four-element LED



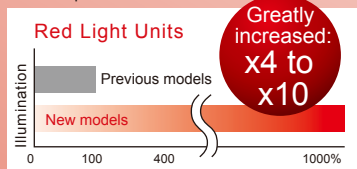
A four-element LED is a compound semiconductor device that is composed of four elements (In, Ga, Al, and P). It is brighter and has a longer life than a three-element LED.

## Feature 2 Greatly Increased Brightness

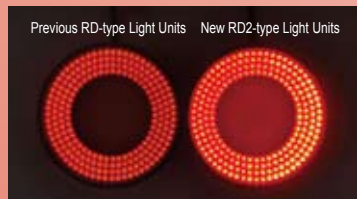
Increase in Brightness:

**x4 to x10**

\*The brightness ratio to the previous RD-type Light Units depends on the model.



\*Based on CCS measurements.

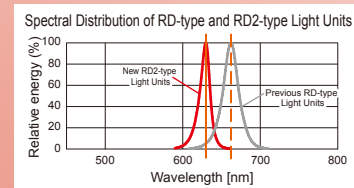
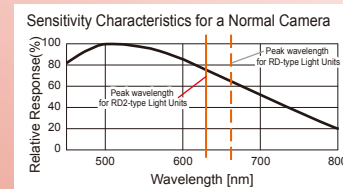


Brightness has been increased to 4 to 10 times that of the previous RD-type Light Units. This brings solutions for difficult applications that require a higher output level.

Peak Wavelength:

**630 nm**

\*Sensitivity characteristics depend on the camera that is used.



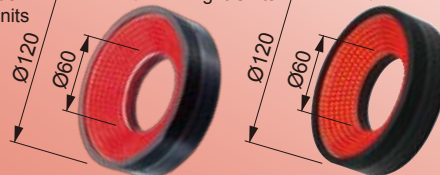
The peak wavelength has changed from 660 to 630 nm. This shift produces the optimum wavelength for camera sensitivity characteristics.

## Feature 3 No Changes Required to Installation Dimensions

Size Example

Previous RD-type Light Units

New RD2-type Light Units



The external dimensions and mounting hole positions are the same as those of the previous RD-type Light Units. This allows you to use the previous installation dimensions.

## Feature 4 Input Voltage Unified to 24 V

Previous Models

12-V Light Units  
Previous RD-type Light Units



24-V Light Units  
Red, Blue, and Green Light Units

All Light Units unified to 24 V.

Renewed.

RD2-type Light Units

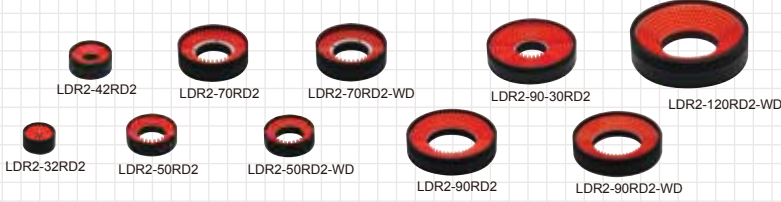



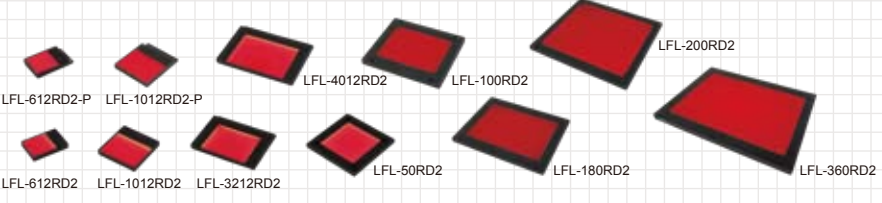





24-V Light Units



# Standard Red Light Units

## A Total of 55 Models Renewed.

CCS has renewed 55 models in our Standard Red Light Units lineup, including our standard Direct-lighting Ring Light Units, as well as our Flat Light Units and Dome Light Units. CCS will provide the optimum Red Light Units for your site environment.

Direct-lighting Light Units	<b>LDR2 series</b>	 <p>LDR2-42RD2, LDR2-70RD2, LDR2-70RD2-WD, LDR2-90-30RD2, LDR2-120RD2-WD, LDR2-32RD2, LDR2-50RD2, LDR2-50RD2-WD, LDR2-90RD2, LDR2-90RD2-WD</p>
	<b>LDR2-LA series</b>	 <p>LDR2-48RD2-LA, LDR2-74RD2-LA, LDR2-100RD2-LA, LDR2-132RD2-LA, LDR2-170RD2-LA, LDR2-208RD2-LA</p>
	<b>LDR-LA1 series</b>	 <p>LDR-75RD2-LA1, LDR-96RD2-LA1, LDR-146RD2-LA1, LDR-176RD2-LA1, LDR-206RD2-LA1</p>
	<b>SQR series</b>	 <p>SQR-56RD2, SQR-56RD2-WD</p>
Flat Light Units	<b>LFL series</b>	 <p>LFL-612RD2-P, LFL-1012RD2-P, LFL-4012RD2, LFL-100RD2, LFL-200RD2, LFL-612RD2, LFL-1012RD2, LFL-3212RD2, LFL-50RD2, LFL-180RD2, LFL-360RD2</p>
Indirect-lighting Ring Light Units	<b>LKR series</b>	 <p>LKR-70RD2, LKR-70-8RD2, LKR-125RD2</p>
	<b>LFR series</b>	 <p>LFR-100RD2, LFR-100RD2-K, LFR-130RD2, LFR-130RD2-K, LFR-200RD2, LFR-250RD2, LFR-330RD2</p>
	<b>FPR series</b>	 <p>FPR-100RD2, FPR-136RD2, FPR-180RD2</p>
	Dome Light Units	<b>LDM2 series</b>
Coaxial Light Units	<b>MSU series</b>	 <p>MSU-10RD2, MSU-30x20RD2, MSU-30RD2</p>
Spotlights	<b>LV-27 series</b>	 <p>LV-27RD2</p>

# Specifications Comparison for Previous and New Models

## Previous Models

Model name	Dimensions	Input voltage	Power consumption	Peak emitted light wavelength (typ.)	Weight
LDR2-32RD	OD: 32 mm, ID: 10 mm, H: 16 mm	12 V	1.5 W	660 nm	30 g
LDR2-42RD	OD: 42 mm, ID: 18 mm, H: 18 mm	12 V	2.1 W	660 nm	50 g
LDR2-50RD	OD: 50 mm, ID: 28 mm, H: 16 mm	12 V	3.0 W	660 nm	50 g
LDR2-70RD	OD: 70 mm, ID: 35 mm, H: 22 mm	12 V	6.0 W	660 nm	110 g
LDR2-90RD	OD: 90 mm, ID: 50 mm, H: 20 mm	12 V	9.5 W	660 nm	170 g
LDR2-90-30RD	OD: 90 mm, ID: 30 mm, H: 20 mm	12 V	14 W	660 nm	220 g
LDR2-50RD-WD	OD: 50 mm, ID: 28 mm, H: 16 mm	12 V	3.0 W	660 nm	50 g
LDR2-70RD-WD	OD: 70 mm, ID: 35 mm, H: 22 mm	12 V	6.0 W	660 nm	110 g
LDR2-90RD-WD	OD: 90 mm, ID: 50 mm, H: 20 mm	12 V	9.5 W	660 nm	170 g
LDR2-120RD-WD	OD: 120 mm, ID: 60 mm, H: 31.5 mm	12 V	24 W	660 nm	510 g
LDR2-48RD-LA	OD: 48 mm, ID: 22 mm, H: 18.5 mm	12 V	2.4 W	660 nm	50 g
LDR2-74RD-LA	OD: 74 mm, ID: 48 mm, H: 19 mm	12 V	4.5 W	660 nm	90 g
LDR2-100RD-LA	OD: 100 mm, ID: 70 mm, H: 22 mm	12 V	9.0 W	660 nm	170 g
LDR2-132RD-LA	OD: 132 mm, ID: 96 mm, H: 22 mm	12 V	13 W	660 nm	270 g
LDR2-170RD-LA	OD: 170 mm, ID: 134 mm, H: 22 mm	12 V	18 W	660 nm	350 g
LDR2-208RD-LA	OD: 208 mm, ID: 174 mm, H: 22 mm	12 V	22 W	660 nm	380 g
LDR-75LA-1	OD: 75 mm, ID: 46 mm, H: 10 mm	12 V	3.0 W	660 nm	55 g
LDR-96LA-1	OD: 96 mm, ID: 60 mm, H: 10 mm	12 V	3.0 W	660 nm	100 g
LDR-146LA-1	OD: 146 mm, ID: 110 mm, H: 10 mm	12 V	4.8 W	660 nm	170 g
LDR-176LA-1	OD: 176 mm, ID: 140 mm, H: 10 mm	12 V	6.0 W	660 nm	210 g
LDR-206LA-1	OD: 206 mm, ID: 170 mm, H: 10 mm	12 V	7.2 W	660 nm	250 g
SQR-56-N	W: 56 mm, D: 56 mm, H: 18 mm	12 V	3.0 W	660 nm	75 g
SQR-56	W: 56 mm, D: 56 mm, H: 18 mm	12 V	3.0 W	660 nm	75 g
LFL-612	W: 26 mm, D: 38 mm, H: 6 mm	12 V	0.3 W	660 nm	25 g
LFL-612P	W: 26 mm, D: 45 mm, H: 7 mm	12 V	0.3 W	660 nm	25 g
LFL-1012	W: 42 mm, D: 43 mm, H: 6 mm	12 V	0.6 W	660 nm	35 g
LFL-1012P	W: 42 mm, D: 53 mm, H: 7 mm	12 V	0.6 W	660 nm	35 g
LFL-3212	W: 66 mm, D: 81 mm, H: 7 mm	12 V	1.8 W	660 nm	80 g
LFL-4012	W: 74 mm, D: 95 mm, H: 7 mm	12 V	2.1 W	660 nm	105 g
LFL-50	W: 72 mm, D: 72 mm, H: 6 mm	12 V	2.4 W	660 nm	50 g
LFL-100	W: 120 mm, D: 132 mm, H: 8 mm	12 V	4.2 W	660 nm	215 g
LFL-180	W: 177 mm, D: 214 mm, H: 8 mm	12 V	7.2 W	660 nm	375 g
LFL-200	W: 222 mm, D: 234 mm, H: 8 mm	12 V	9.0 W	660 nm	500 g
LFL-360	W: 310 mm, D: 410 mm, H: 16 mm	12 V	27 W	660 nm	2,360 g
LKR-70A	OD: 74 mm, ID: 20 mm, H: 18 mm	12 V	3.0 W	660 nm	125 g
LKR-70-8	OD: 74 mm, ID: 8 mm, H: 18 mm	12 V	3.0 W	660 nm	140 g
LKR-125	OD: 125 mm, ID: 25 mm, H: 26 mm	12 V	4.5 W	660 nm	295 g
LFR-100	OD: 102 mm, ID: 33 mm, H: 12 mm	12 V	3.6 W	660 nm	170 g
LFR-100K	OD: 102 mm, ID: 33 mm, H: 17 mm	12 V	3.6 W	660 nm	190 g
LFR-130	OD: 125 mm, ID: 44 mm, H: 12 mm	12 V	4.5 W	660 nm	250 g
LFR-130K	OD: 123 mm, ID: 44 mm, H: 17 mm	12 V	4.5 W	660 nm	190 g
LFR-200	OD: 216 mm, ID: 70 mm, H: 12 mm	12 V	7.8 W	660 nm	490 g
LFR-250	OD: 272 mm, ID: 120 mm, H: 12 mm	12 V	9.0 W	660 nm	1,080 g
LFR-330	OD: 356 mm, ID: 220 mm, H: 12 mm	12 V	14 W	660 nm	1,500 g
LDM2-50RD	OD: 50 mm, ID: 11 mm, H: 40 mm	12 V	3.9 W	660 nm	100 g
LDM2-90RD	OD: 94 mm, ID: 16 mm, H: 70 mm	12 V	14 W	660 nm	500 g
FPR-100	OD: 100 mm, ID: 73 mm, H: 40 mm	12 V	6.0 W	660 nm	220 g
FPR-136	OD: 136 mm, ID: 109 mm, H: 40 mm	12 V	9.3 W	660 nm	300 g
FPR-180	OD: 180 mm, ID: 153 mm, H: 40 mm	12 V	13 W	660 nm	400 g
MSU-10	W: 46 mm, D: 74 mm, H: 116 mm	12 V	0.7 W	623 nm	275 g
MSU-30	W: 76 mm, D: 116 mm, H: 351 mm	12 V	0.7 W	623 nm	2,000 g
MSU-30X20	W: 66 mm, D: 95 mm, H: 126 mm	12 V	0.5 W	660 nm	540 g
LV-27-R	OD: 27 mm, L: 50 mm, End dia.: 8 mm	12 V	0.7 W	623 nm	40 g

## New Models

Model name	Dimensions	Input voltage	Power consumption	Peak emitted light wavelength (typ.)	Weight
LDR2-32RD2	OD: 32 mm, ID: 10 mm, H: 16 mm	24 V	1.6 W	630 nm	30 g
LDR2-42RD2	OD: 42 mm, ID: 18 mm, H: 18 mm	24 V	2.1 W	630 nm	50 g
LDR2-50RD2	OD: 50 mm, ID: 28 mm, H: 16 mm	24 V	3.1 W	630 nm	50 g
LDR2-70RD2	OD: 70 mm, ID: 35 mm, H: 22 mm	24 V	6.1 W	630 nm	110 g
LDR2-90RD2	OD: 90 mm, ID: 50 mm, H: 20 mm	24 V	11 W	630 nm	170 g
LDR2-90-30RD2	OD: 90 mm, ID: 30 mm, H: 20 mm	24 V	14 W	630 nm	220 g
LDR2-50RD2-WD	OD: 50 mm, ID: 28 mm, H: 16 mm	24 V	3.1 W	630 nm	50 g
LDR2-70RD2-WD	OD: 70 mm, ID: 35 mm, H: 22 mm	24 V	6.1 W	630 nm	110 g
LDR2-90RD2-WD	OD: 90 mm, ID: 50 mm, H: 20 mm	24 V	11 W	630 nm	170 g
LDR2-120RD2-WD	OD: 120 mm, ID: 60 mm, H: 31.5 mm	24 V	24 W	630 nm	510 g
LDR2-48RD2-LA	OD: 48 mm, ID: 22 mm, H: 18.5 mm	24 V	2.1 W	630 nm	50 g
LDR2-74RD2-LA	OD: 74 mm, ID: 48 mm, H: 19 mm	24 V	4.6 W	630 nm	90 g
LDR2-100RD2-LA	OD: 100 mm, ID: 70 mm, H: 22 mm	24 V	9.1 W	630 nm	170 g
LDR2-132RD2-LA	OD: 132 mm, ID: 96 mm, H: 22 mm	24 V	13 W	630 nm	270 g
LDR2-170RD2-LA	OD: 170 mm, ID: 134 mm, H: 22 mm	24 V	18 W	630 nm	350 g
LDR2-208RD2-LA	OD: 208 mm, ID: 174 mm, H: 22 mm	24 V	22 W	630 nm	380 g
LDR-75RD2-LA1	OD: 75 mm, ID: 46 mm, H: 10 mm	24 V	2.6 W	630 nm	55 g
LDR-96RD2-LA1	OD: 96 mm, ID: 60 mm, H: 10 mm	24 V	3.1 W	630 nm	100 g
LDR-146RD2-LA1	OD: 146 mm, ID: 110 mm, H: 10 mm	24 V	4.6 W	630 nm	170 g
LDR-176RD2-LA1	OD: 176 mm, ID: 140 mm, H: 10 mm	24 V	6.1 W	630 nm	210 g
LDR-206RD2-LA1	OD: 206 mm, ID: 170 mm, H: 10 mm	24 V	7.1 W	630 nm	250 g
SQR-56RD2	W: 56 mm, D: 56 mm, H: 18 mm	24 V	3.1 W	630 nm	75 g
SQR-56RD2-WD	W: 56 mm, D: 56 mm, H: 18 mm	24 V	3.1 W	630 nm	75 g
LFL-612RD2	W: 26 mm, D: 38 mm, H: 6 mm	24 V	0.6 W	630 nm	25 g
LFL-612RD2-P	W: 26 mm, D: 45 mm, H: 7 mm	24 V	0.6 W	630 nm	25 g
LFL-1012RD2	W: 42 mm, D: 43 mm, H: 6 mm	24 V	0.6 W	630 nm	35 g
LFL-1012RD2-P	W: 42 mm, D: 53 mm, H: 7 mm	24 V	0.6 W	630 nm	35 g
LFL-3212RD2	W: 66 mm, D: 81 mm, H: 7 mm	24 V	1.6 W	630 nm	80 g
LFL-4012RD2	W: 74 mm, D: 95 mm, H: 7 mm	24 V	2.1 W	630 nm	105 g
LFL-50RD2	W: 72 mm, D: 72 mm, H: 6 mm	24 V	2.1 W	630 nm	50 g
LFL-100RD2	W: 120 mm, D: 132 mm, H: 8 mm	24 V	5.1 W	630 nm	215 g
LFL-180RD2	W: 177 mm, D: 214 mm, H: 8 mm	24 V	7.1 W	630 nm	375 g
LFL-200RD2	W: 222 mm, D: 234 mm, H: 8 mm	24 V	12 W	630 nm	500 g
LFL-360RD2	W: 310 mm, D: 410 mm, H: 16 mm	24 V	30 W	630 nm	2,360 g
LKR-70RD2	OD: 74 mm, ID: 20 mm, H: 18 mm	24 V	2.6 W	630 nm	125 g
LKR-70-8RD2	OD: 74 mm, ID: 8 mm, H: 18 mm	24 V	2.6 W	630 nm	140 g
LKR-125RD2	OD: 125 mm, ID: 25 mm, H: 26 mm	24 V	4.6 W	630 nm	295 g
LFR-100RD2	OD: 102 mm, ID: 33 mm, H: 12 mm	24 V	3.6 W	630 nm	170 g
LFR-100RD2-K	OD: 102 mm, ID: 33 mm, H: 17 mm	24 V	3.6 W	630 nm	190 g
LFR-130RD2	OD: 125 mm, ID: 44 mm, H: 12 mm	24 V	4.6 W	630 nm	250 g
LFR-130RD2-K	OD: 123 mm, ID: 44 mm, H: 17 mm	24 V	4.6 W	630 nm	190 g
LFR-200RD2	OD: 216 mm, ID: 70 mm, H: 12 mm	24 V	8.1 W	630 nm	490 g
LFR-250RD2	OD: 272 mm, ID: 120 mm, H: 12 mm	24 V	11 W	630 nm	1,080 g
LFR-330RD2	OD: 356 mm, ID: 220 mm, H: 12 mm	24 V	14 W	630 nm	1,500 g
LDM2-50RD2	OD: 50 mm, ID: 11 mm, H: 40 mm	24 V	3.6 W	630 nm	100 g
LDM2-90RD2	OD: 94 mm, ID: 16 mm, H: 70 mm	24 V	14 W	630 nm	500 g
FPR-100RD2	OD: 100 mm, ID: 73 mm, H: 40 mm	24 V	6.1 W	630 nm	220 g
FPR-136RD2	OD: 136 mm, ID: 109 mm, H: 40 mm	24 V	9.1 W	630 nm	300 g
FPR-180RD2	OD: 180 mm, ID: 153 mm, H: 40 mm	24 V	13 W	630 nm	400 g
MSU-10RD2	W: 46 mm, D: 74 mm, H: 116 mm	24 V	0.8 W	630 nm	275 g
MSU-30RD2	W: 76 mm, D: 116 mm, H: 351 mm	24 V	0.8 W	630 nm	2,000 g
MSU-30X20RD2	W: 66 mm, D: 95 mm, H: 126 mm	24 V	0.8 W	630 nm	540 g
LV-27RD2	OD: 27 mm, L: 50 mm, End dia.: 8 mm	24 V	0.8 W	630 nm	40 g

\*The RD-type and RD2-type Light Units have different input voltages. Always use a 24-VDC Control Unit with RD2-type Light Units.

\*The RD-type and RD2-type Light Units have different power consumptions. Confirm that the total power consumption does not exceed the output capacity of the Control Unit before you use the new RD2-type Light Units.

\*The peak emitted light wavelength of the new models is 630 nm. For a Sharp-cut Filter, use the optional R60 Sharp-cut Filter.

# CCS Control Units for the Optimum Performance of 24-V Light Units

## Digital Control Units **» PD3 series**

### Select a Control Unit According to the Network

The PD3-series Digital Control Units provide high performance and a choice of external control methods. You can perform external control through parallel, EIA-485, or Ethernet communications. For the outputs to the Light Units, you can select from 3-channel 28-W Models, 4-channel 46-W Models, and 8-channel 95-W Models. The light intensity can be set to any of 256 different levels. Lighting control includes constant lighting, ON/OFF lighting, and strobe lighting.

■ Strobe Lighting Time \*These models do not include an overdrive.  
40 µs/80 µs/120 µs/200 µs/600 µs/1 ms/4 ms/10 ms/20 ms/40 ms/

Other Digital Control Units: PD2-1024, PD2-3024, PD2-3024-2, PD2-3024-4, PD2-3024-8, and PD2-5024



## Analog Control Units **» PSB series**

### Popularly Priced Control Units for LED Light Units

\*Use a Digital Control Unit if detailed control settings, control accuracy, or reproducibility is required.

PSB-series Control Units provide stepless intensity control with a variable voltage. Constant lighting makes them ideal for shutter speeds of 1/4,000 and faster. CCS also provides worldwide (WW) models with a wide voltage range of 100 to 240 VAC.



## Strobe Control Unit **» PTU2 series**

### Compatible with Over 300 Models of LED Light Units

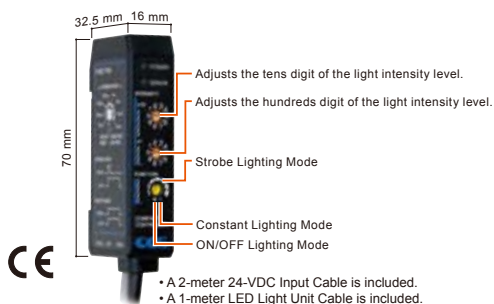
This Control Unit enables using CCS Standard LED Light Units for strobe lighting. You can increase the brightness many times with the ON/OFF control feature of the PSB Series, PD3 Series, and other Series and the strobe lighting feature of the STU-3000 Series. Two independent channels are provided, and the strobe time can be set to between 10 and 990 µs for each channel.



## Compact Controllers **» CC-ST-1024**

### Compact, Lightweight Controllers for LED Light Units

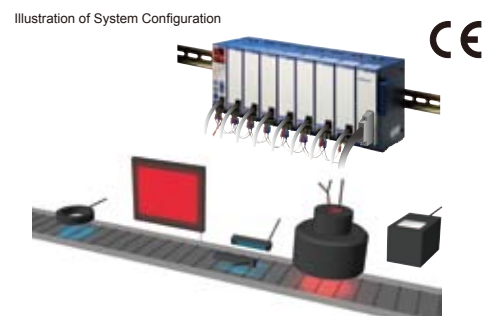
The CC-ST-1024 is an LED Light Unit Controller that is the size of a sensor amplifier. It mounts to DIN rail. It can be installed inside a control panel, alongside sensor amplifiers inside equipment, and in many other locations. The 24-VDC power input is suited to work sites.



## Building Block Control Units **» BB series**

### Building-block Control Units That Link Together

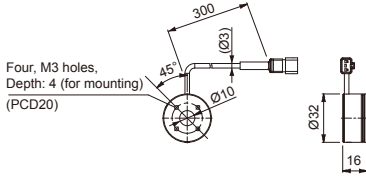
Mixing and matching Master Units, Slave Units, and Interface Units produces a wide variety of system configurations. Control flexibility can be easily achieved by adding necessary Units or changing Units. (Up to 18 Units can be joined together.) The 24-VDC power input is suited to work sites. DIN rail mounting is also possible.



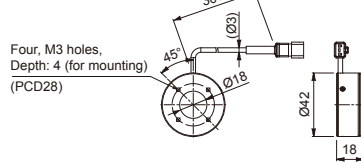
# Dimension Diagrams (Unit: mm)

## » LDR2 series

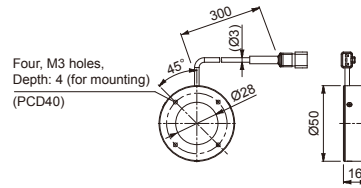
LDR2-32RD2



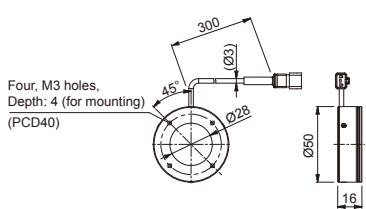
LDR2-42RD2



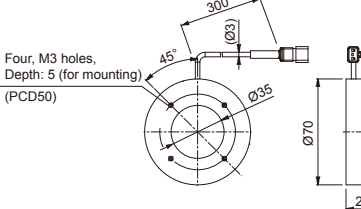
LDR2-50RD2



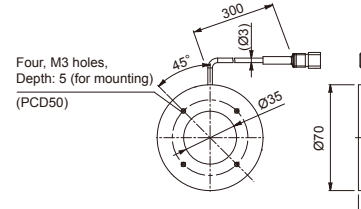
LDR2-50RD2-WD



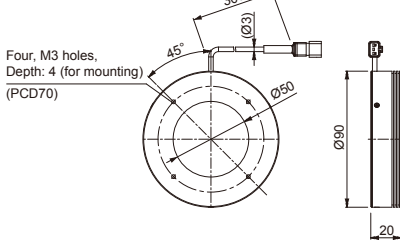
LDR2-70RD2



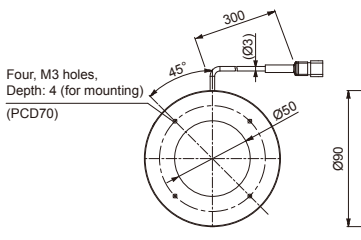
LDR2-70RD2-WD



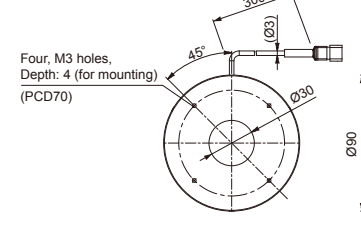
LDR2-90RD2



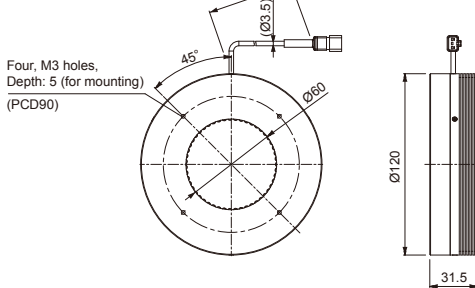
LDR2-90RD2-WD



LDR2-90-30RD2

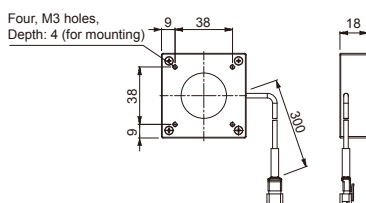


LDR2-120RD2-WD

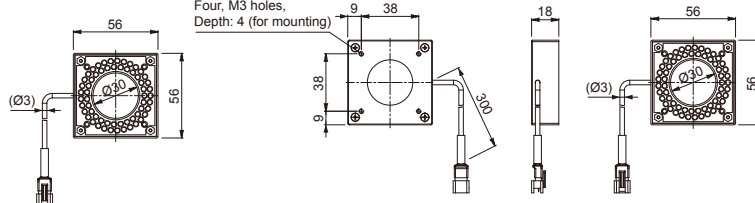


## » SQR series

SQR-56RD2



SQR-56RD2-WD



### Additional Information

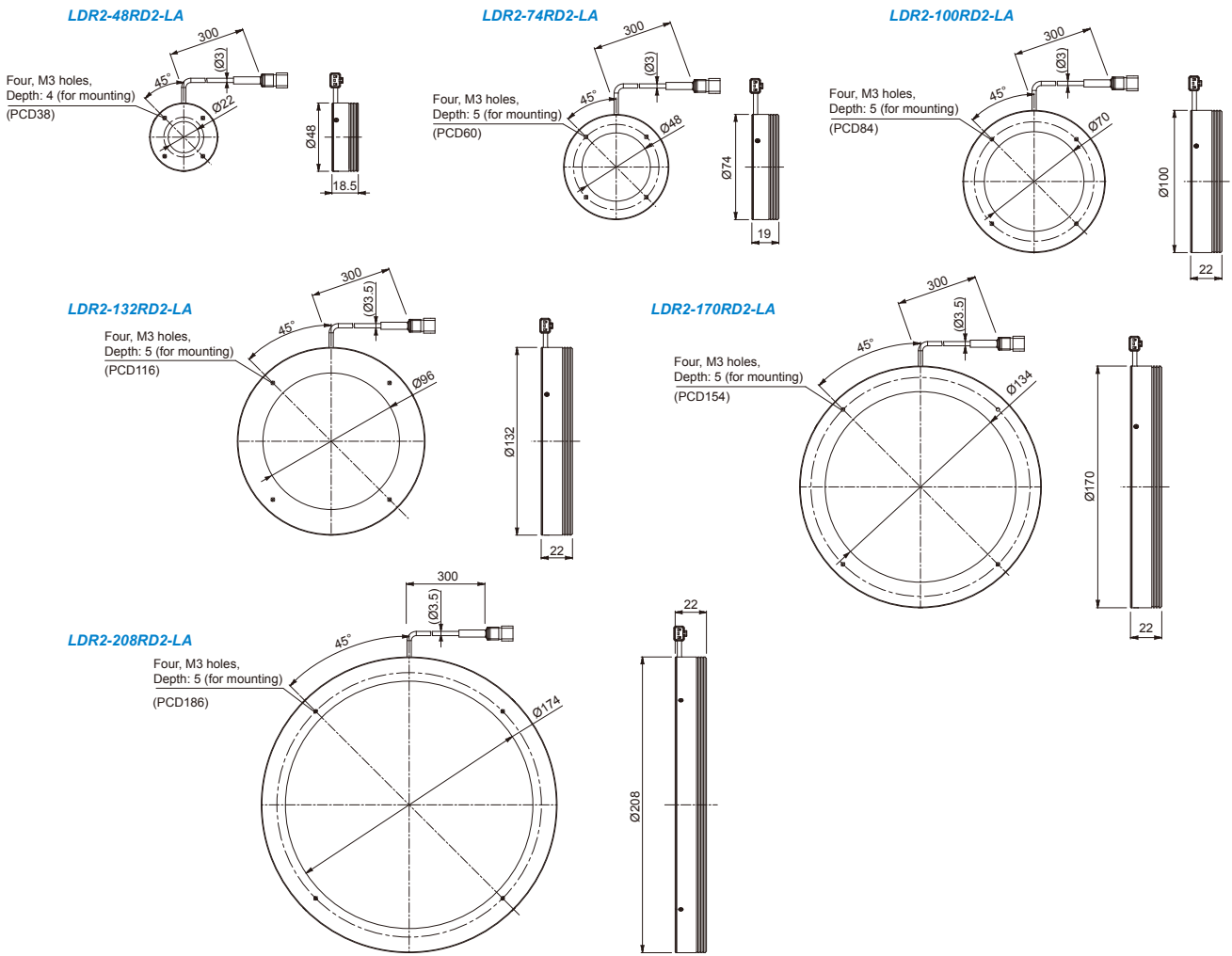
● Dimensions

● Options

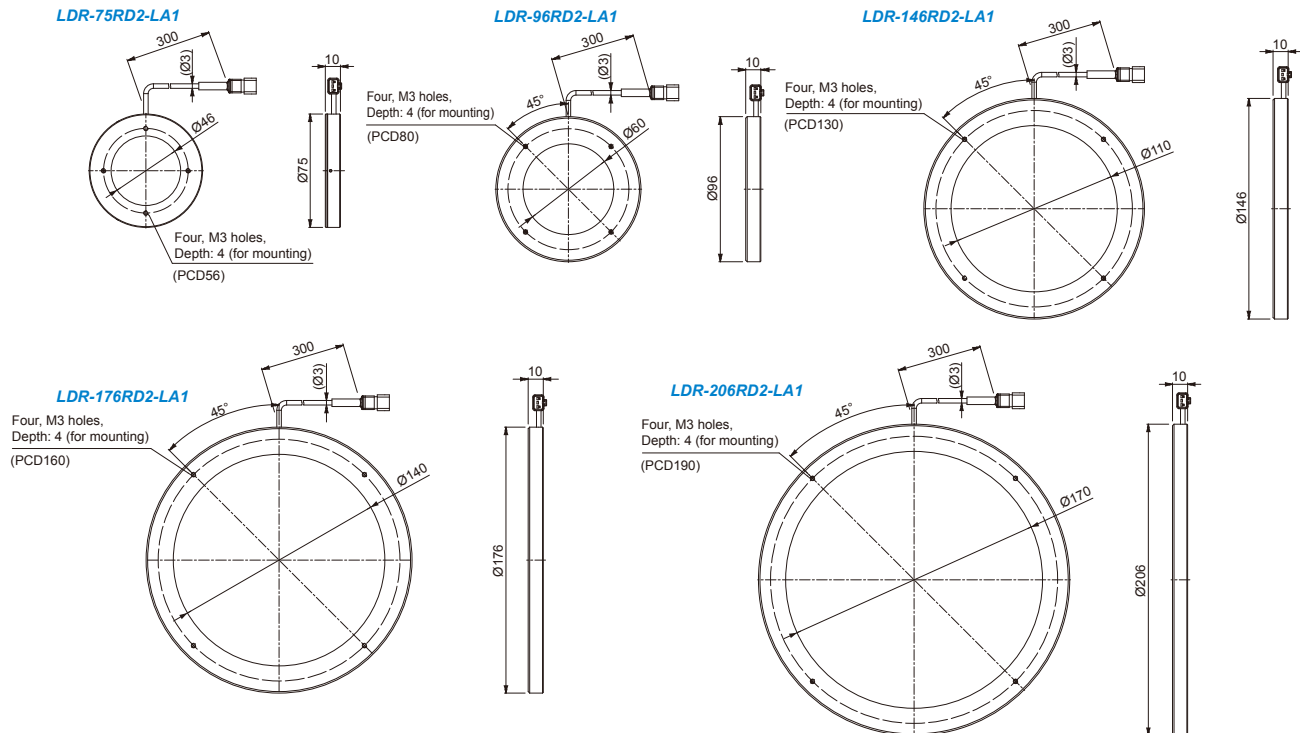
The dimensions and mounting hole locations are the same as the previous models. For options, the same sizes can be used as for the previous models. (For a Sharp-cut Filter, use the R60.)

# Dimension Diagrams (Unit: mm)

## » LDR2-LA series



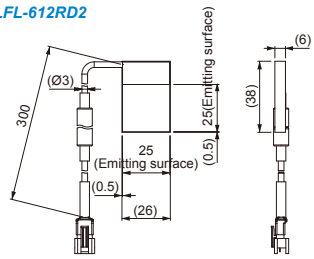
## » LDR-LA1 series



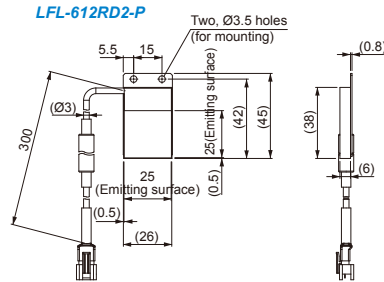
# Dimension Diagrams (Unit: mm)

## » LFL series

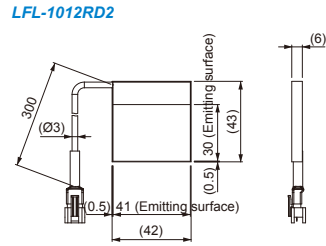
LFL-612RD2



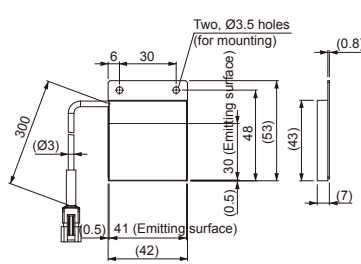
LFL-612RD2-P



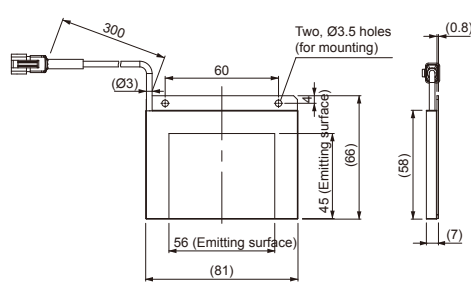
LFL-1012RD2



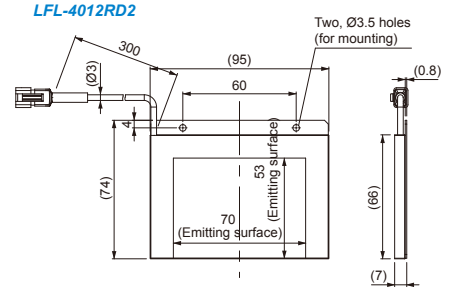
LFL-1012RD2-P



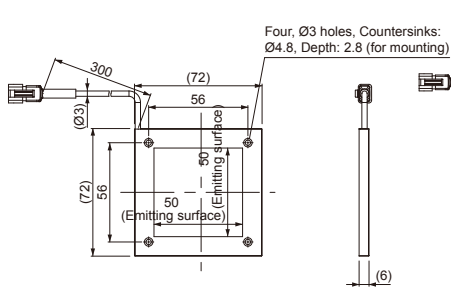
LFL-3212RD2



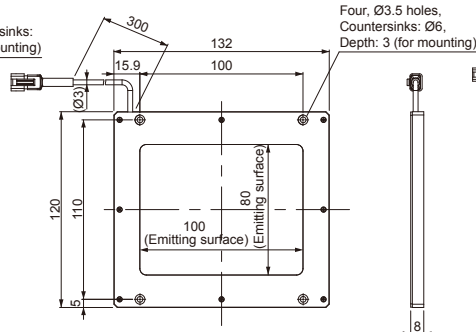
LFL-4012RD2



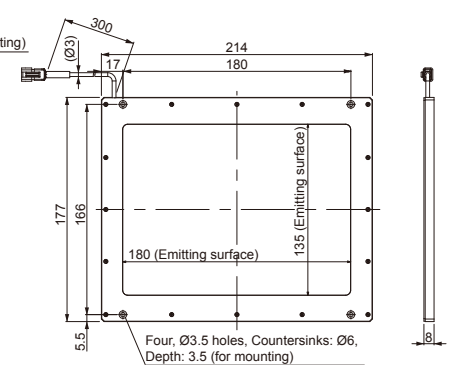
LFL-50RD2



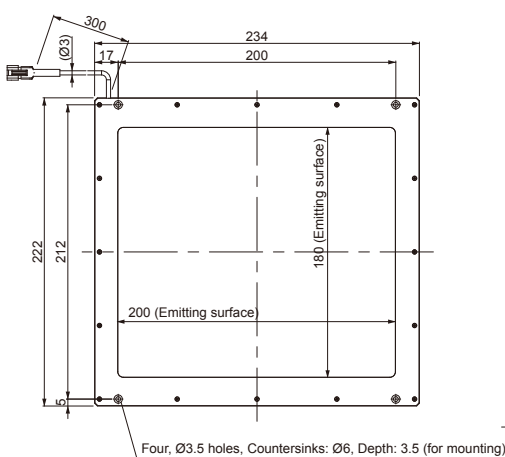
LFL-100RD2



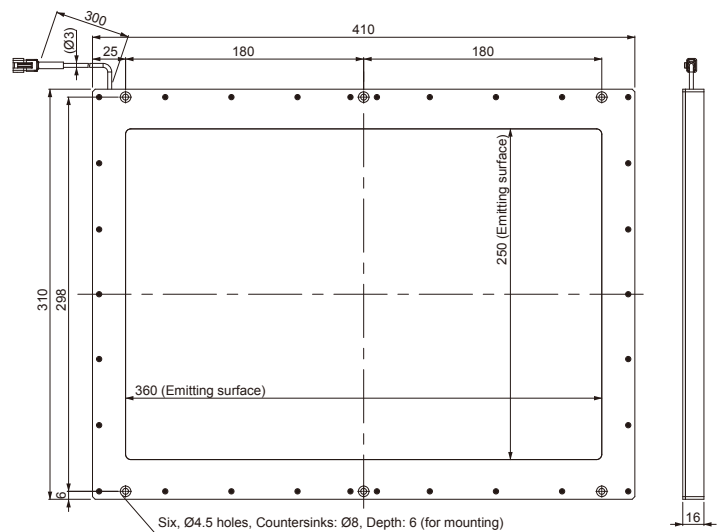
LFL-180RD2



LFL-200RD2



LFL-360RD2



### Additional Information

● Dimensions

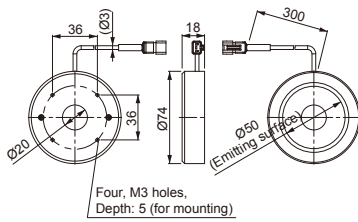
● Options

The dimensions and mounting hole locations are the same as the previous models. For options, the same sizes can be used as for the previous models. (For a Sharp-cut Filter, use the R60.)

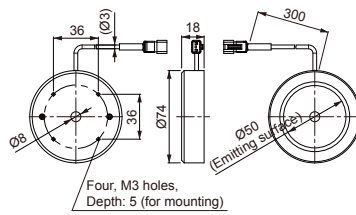
# Dimension Diagrams (Unit: mm)

## » LKR series

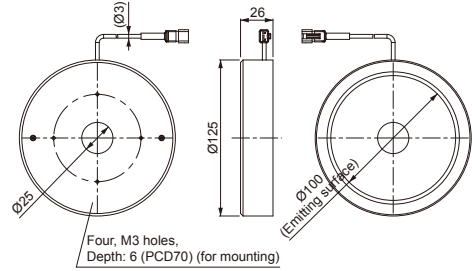
LKR-70RD2



LKR-70-8RD2

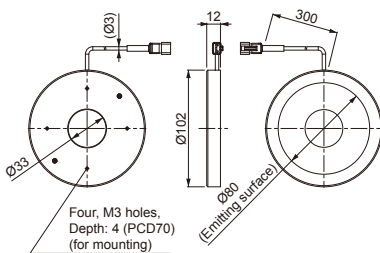


LKR-125RD2

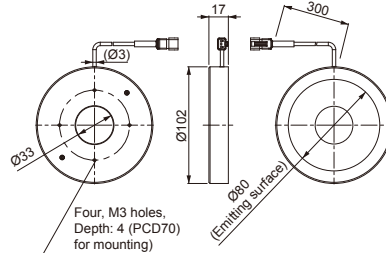


## » LFR series

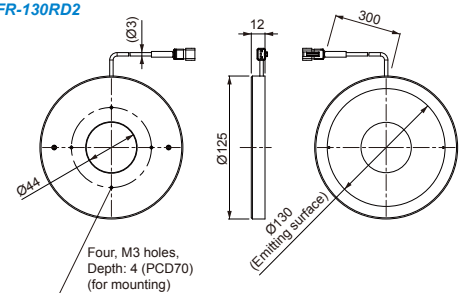
LFR-100RD2



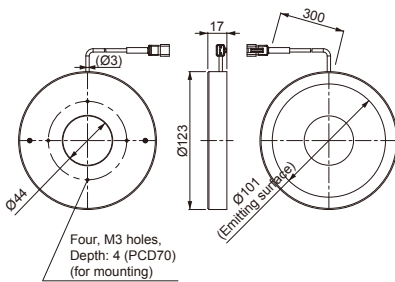
LFR-100RD2-K



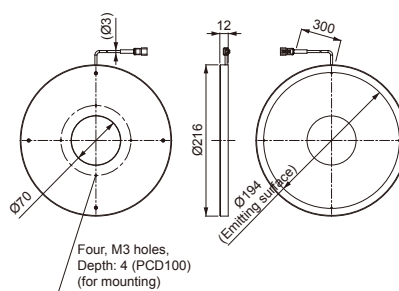
LFR-130RD2



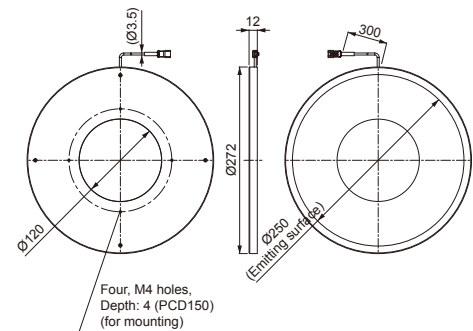
LFR-130RD2-K



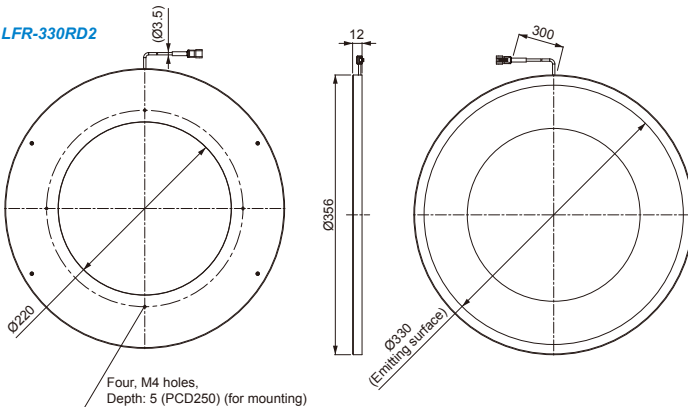
LFR-200RD2



LFR-250RD2



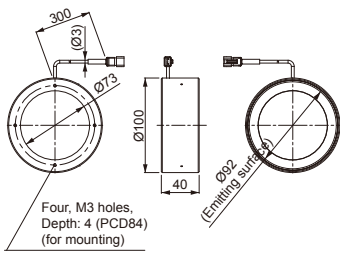
LFR-330RD2



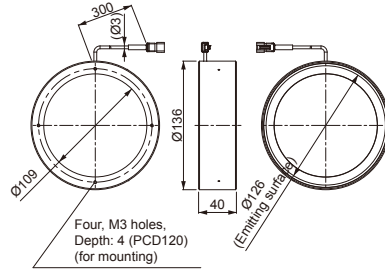
# Dimension Diagrams (Unit: mm)

## » FPR series

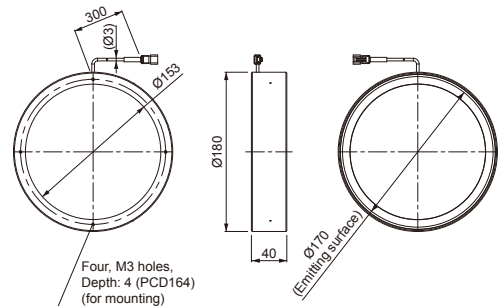
FPR-100RD2



FPR-136RD2

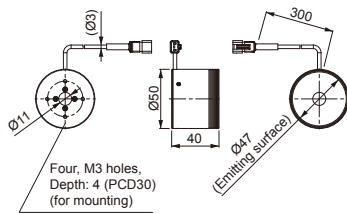


FPR-180RD2

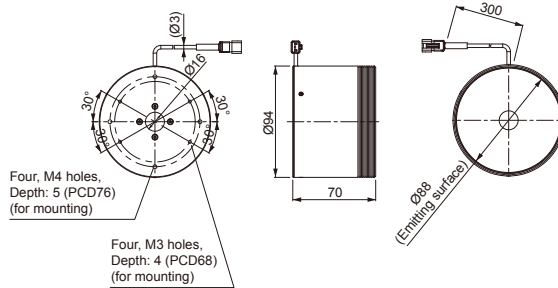


## » LDM2 series

LDM2-50RD2

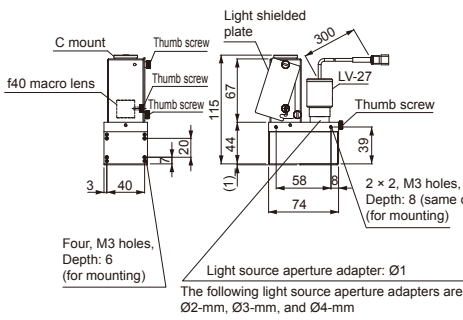


LDM2-90RD2

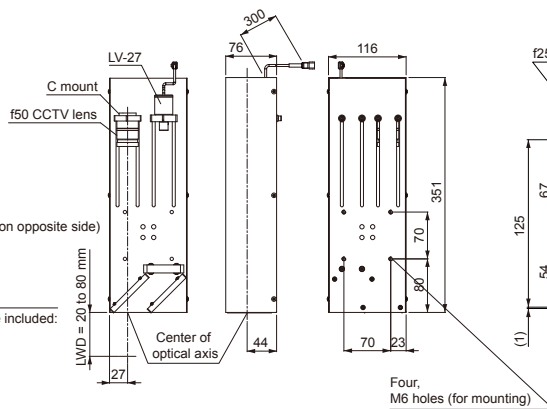


## » MSU series

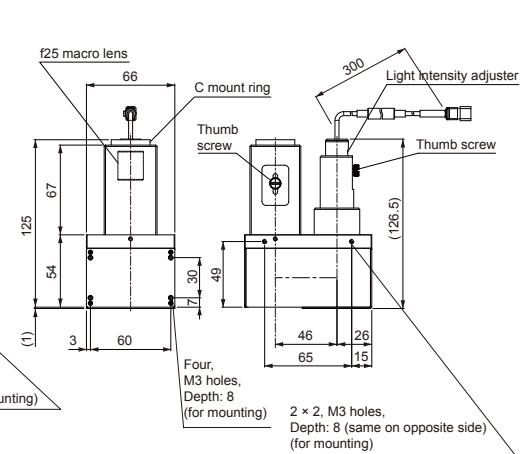
MSU-10RD2



MSU-30RD2

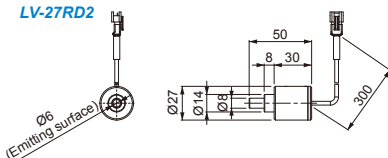


MSU-30x20RD2



## » LV-27 series

LV-27RD2



### Additional Information

● Dimensions

● Options

The dimensions and mounting hole locations are the same as the previous models. For options, the same sizes can be used as for the previous models. (For a Sharp-cut Filter, use the R60.)

# Optional Accessories

Control Passed Wavelengths in Specific Regions

## Sharp Cut Filters

### » R60 series



Mount a Filter in front of the lens to block light of 600 nm or less and transmit approximately 85% of light in longer wavelength bands.

Direct number	Model name	Notes
4000658	R60-C	For attachment to C mount.
4000657	R60-16	M16.0 P0.5
4000609	R60-25	M25.5 P0.5
4000489	R60-27	M27.0 P0.5
4000490	R60-30	M30.5 P0.5
4000491	R60-40	M40.5 P0.5
4000659	R60-46	M46.0 P0.75

Remove Surface Reflections

## Polarizing Filters

### » PL series



Screw the Polarizing Filter onto the front of the camera lens. A Polarizing Filter eliminates reflections and glare from surfaces in combination with a Polarizer.

Direct number	Model name	Notes
4000370	PL-25	M25.5 P0.5
4000372	PL-25-NL	M25.5 P0.5 (with lock)
4000374	PL-27	M27.0 P0.5
4000376	PL-27-NL	M27.0 P0.5 (with lock)
4000377	PL-30	M30.5 P0.5
4000379	PL-30-NL	M30.5 P0.5 (with lock)

Direct number	Model name	Notes
4000383	PL-40	M40.5 P0.5
4000384	PL-40-NL	M40.5 P0.5 (with lock)
4000388	PL-46	M46.0 P0.75

Remove Surface Reflections

## Polarizers

### » PL series



Attach a Polarizer to many different Lights to reduce glare from glossy objects in combination with a Polarizing Filter.

Direct number	Model name
4000428	PL-LDR-32
4000430	PL-LDR-42
4000432	PL-LDR-50
4000623	PL-LDR2-70*
4000441	PL-LDR-90
4000424	PL-LDR-120-40
4000465	PL-SQR-56

\*The PL-LDR2-70 comes with an adapter for installation.

Prevent Shine and Glare

## Dispersion Plates

### » DF series



Ring Lights



Low-angle Lights

Attach a Diffusion Plate to many different Lights to reduce glare from glossy objects.

Direct number	Model name	Direct number	Model name
4000140	DF-LDR-32	4000146	DF-LDR-48LA
4000143	DF-LDR-42	4000160	DF-LDR-74LA
4000147	DF-LDR-50	4000123	DF-LDR-100LA
4000156	DF-LDR-70	4000129	DF-LDR-132LA
4000164	DF-LDR-90	4000134	DF-LDR-170LA
4000125	DF-LDR-120-45	4000138	DF-LDR-208LA
4000201	DF-SQR-56		

Convert Diffused Light into Parallel Light

## Light Control Films

### » LC series



Mount a Film to backlights to suppress light diffraction for visual inspections, enabling sharp imaging of profiles.

Direct number	Model name
4000300	LC-LFL-100
4000301	LC-LFL-180
4000302	LC-LFL-200

Secure Dispersion Plates and Polarizing Plates to Lights

## Light Adapter Rings

### » AD series



These Adapter Rings are for the LDR2-32/42/50/90/120. Use them to attach Dispersion Plates or Polarizing Plates to Lights.

Direct number	Model name	Notes
4000679	AD-LDR-32	For the LDR2-32 and LDR-32
4000680	AD-LDR-42	For the LDR2-42 and LDR-42
4000681	AD-LDR-50	For the LDR2-50 and LDR-50B
4000686	AD-LDR-90	For the LDR2-90 and LDR-90B
4000675	AD-LDR-120	

Secure Lights to the Threads for Lens Filters

## Lens Attachment Rings

### » MR series



These Attachment Rings are for the LDR2-32/50. You can use a Lens Attachment Ring to directly attach a Light to the thread for a Lens Filter. They are ideal for installation in restricted spaces.

Direct number	Model name	Notes
4000692	MR-LDR-32-M25	M25.5 P0.5
4000693	MR-LDR-32-M27	M27.0 P0.5
4000694	MR-LDR-32-M30	M30.5 P0.5
4000697	MR-LDR-50-M25	M25.5 P0.5
4000698	MR-LDR-50-M27	M27.0 P0.5
4000699	MR-LDR-50-M30	M30.5 P0.5

Direct Numbers: You can easily access the information page for any of our products by entering the product's 7-digit direct number in the designated box on the CCS website (image processing page).

LED color	Red (RD2)	Cable length	0.3 m
Peak wavelength	630 nm (typ.)	Operating temperature and humidity	Temperature: 0 to 40°C, Humidity: 20% to 85%RH (with no condensation)
Input voltage	24 VDC (max.)	Storage temperature and humidity	Temperature: -20 to 60°C, Humidity: 20% to 85%RH (with no condensation)
Connector	SMR-03V-B	Cooling method	Natural air cooling
Polarity and signals	1: Anode (+), brown, 2: NC, 3: Cathode (-), blue		
Spectral distribution	<p>Measurement conditions: Light intensity of 100%, constant lighting</p>		
Spectral distribution of Direct-lighting Ring Light Units			

\*The peak emitted light wavelength is 630 nm. If a Sharp-cut Filter, is required use the optional R60 Sharp-cut Filter.  
 \*For all other options, the same sizes can be used as for the RD models.

## Direct Numbers

### Direct numbers:

A direct number is a 7-digit number assigned to a CCS product. You can easily access the web page providing information on any desired product by simply entering the direct number in the space provided on the CCS website pages for machine vision.

For details: [http://www.ccs-grp.com/s6\\_common/direct.html](http://www.ccs-grp.com/s6_common/direct.html)

Series	Direct number	Model name	Series	Direct number	Model name	Series	Direct number	Model name
LDR2	1005296	LDR2-32RD2	LDR-LA1	1005312	LDR-75RD2-LA1	LFR	1005534	LFR-100RD2
	1005297	LDR2-42RD2		1005313	LDR-96RD2-LA1		1005535	LFR-100RD2-K
	1005298	LDR2-50RD2		1005314	LDR-146RD2-LA1		1005536	LFR-130RD2
	1005299	LDR2-70RD2		1005315	LDR-176RD2-LA1		1005537	LFR-130RD2-K
	1005301	LDR2-90RD2		1005316	LDR-206RD2-LA1		1005538	LFR-200RD2
	1005300	LDR2-90-30RD2		1005528	LFL-612RD2		1005539	LFR-250RD2
	1005303	LDR2-50RD2-WD	1005529	LFL-612RD2-P	1005540		LFR-330RD2	
	1005302	LDR2-70RD2-WD	1005520	LFL-1012RD2	1005544		FPR-100RD2	
	1005304	LDR2-90RD2-WD	1005521	LFL-1012RD2-P	1005545		FPR-136RD2	
	1005305	LDR2-120RD2-WD	1005524	LFL-3212RD2	1005546		FPR-180RD2	
SQR	1005317	SQR-56RD2	LFL	1005526	LFL-4012RD2	LDM2	1005542	LDM2-50RD2
	1005318	SQR-56RD2-WD		1005527	LFL-50RD2		1005543	LDM2-90RD2
LDR2-LA	1005306	LDR2-48RD2-LA		1005519	LFL-100RD2	MSU	1005549	MSU-10RD2
	1005307	LDR2-74RD2-LA		1005522	LFL-180RD2		1005550	MSU-30RD2
	1005308	LDR2-100RD2-LA	1005523	LFL-200RD2	1005547		MSU-30X20RD2	
	1005309	LDR2-132RD2-LA	1005525	LFL-360RD2	LV-27	1005548	LV-27RD2	
	1005310	LDR2-170RD2-LA	1005531	LKR-70RD2				
	1005311	LDR2-208RD2-LA	1005530	LKR-70-8RD2				
			1005532	LKR-125RD2				

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### Caution

- To ensure proper and safe use of the product, please read the Instruction Guide completely before using the product.
- For product improvement, specifications and designs are subject to change without notice.