



Provides direct light from an angled emitting part



Applications

Character recognition, visual inspection, inspections for damage or stains, reading 2-dimensional code, inspecting parts on boards, etc.

Standard Ring Lights

Uses a flexible circuit board to achieve the functions needed for a Ring Light. It can illuminate workpieces at an angle and can illuminate the whole workpiece. This alleviates the influence of slight position or inclination deviations in the workpiece and enables stable imaging.

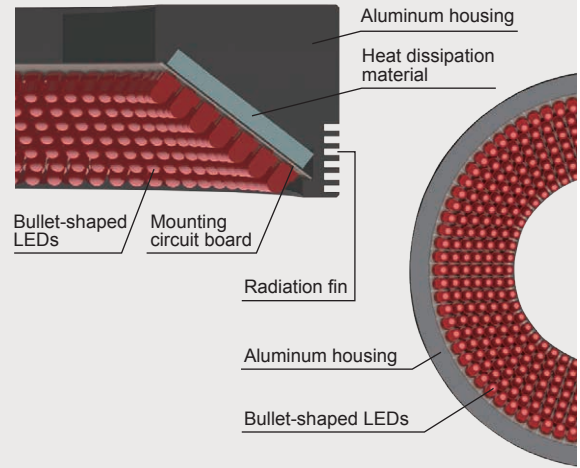
Flexible circuit board



Succeeds in Greatly Reducing LED's Heat

Heat dissipation material is used between the board and the aluminum housing, absorbing heat produced by the LEDs. This succeeds in greatly reducing the creation of heat, which causes the LEDs to deteriorate.

Cross-section image of the LDR2-120



Custom Order Example

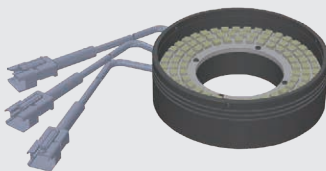
Please contact your CCS sales representative.

E.g.: Different color

Wavelength/Color Creating a full color (RGB) light unit

Customizable items

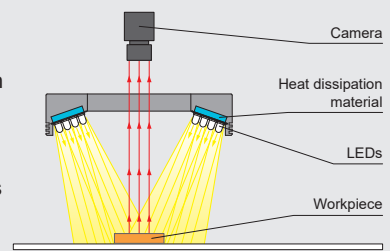
- External/Internal diameter
- Wavelength/Color
- Increase output
- Cable length
- Illuminating angle
- Format/material
- Connector format
- Installation/mounting



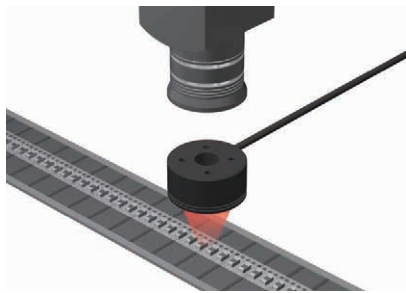
Example Configuration

Bend the flexible circuit board to any shape necessary and mount LEDs with high density. Illuminates the workpiece so that direct light is concentrated in the center.

LDR2-90



➤ Imaging Example: Imaging Electrodes of Electronic Parts



Description	Visual inspection
Workpiece	Electronic parts
Conventional lighting	LED Bar Light
New lighting	LDR2-32RD2
Result	Improved uniformity

Workpiece image

Electronic parts

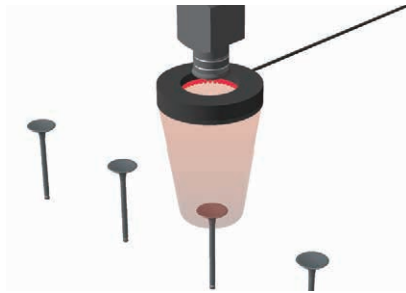
LED Bar Light

It's difficult to make an image of the electrode part using a Bar Light.

LDR2-32RD2

A Ring Light can illuminate the electrode part evenly and make an image.

➤ Imaging Example: Imaging Text on Intake Valves



Description	Character recognition
Workpiece	Intake valves (automobile parts)
Conventional lighting	LED Ring Light
New lighting	LDR2-50RD2
Result	Emphasized characters

Workpiece image

Intake valves

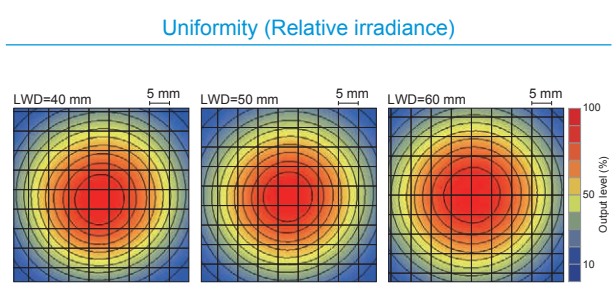
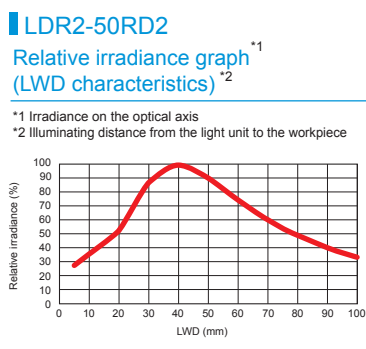
LED Ring Light

It's difficult to clearly recognize the text due to the inner indentation.

LDR2-50RD2

Allows for image that makes the character edges stand out.

➤ Data: Relative Irradiance Graph and Uniformity (Representative Example)



The data included is for reference only. Actual values may vary.

LDR2 LDR2-LA LDR-LA1 SQR SQR-TP	Ring (Direct)
HLDR3 HPR2 LFR LKR FPR	Ring (Convergent/Diffused)
FPQ3	Square
LDL2 LDLB HLDL3 LB	Bar
TH2 (5 types) LFL	Flat
HPD2 LDM2 LAV PDM LFXV LFX3 LFX3-PT	Dome
LFV3 LFV3-G	Coaxial
MSU MFU	Coaxial
PF	Strobe
HLDR-IP HSL-PCL	Water-proof
Small COB Lights	COB
UV3/VL3 UV LNSP-UV3-FN	UV / Violet
IR2 (Under 1000-nm Type) IR (Over 1000-nm Type) CIR	Infrared
IU	Intensity Control
HLV3 LV LSP HFS/HFR HLV3-22-4-NR HLV3-3M-RGB-4 PFBR-600SW2 PFBR-150 PFB3	Spot, Etc.
LNLP LNSP2 Coaxial Units LNSP-FN LN/LN-HK	Line (Convergent)
LNSD LND2 LT LNV LFXV (Rectangular Type) TH2 (Rectangular Type)	Line (Diffused)
LNDG LNIS2 LNIS LNIS-FN	Line (Oblique Angled)
Telecentric Lens Macro Lens	Lenses

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Refer to our website for product details.

CCS LDR2

Search



Introduction to Half Ring Lights (Custom Order Example)

LDR2-HF Series

It has a space-saving design that can be installed and used in a limited space

- The contrast can be increased by illuminating only the required parts
- Can be installed in a device with limited space and illuminates the area to be observed in pinpoint
- Can be customized according to the application such as emission color and size



LDR2-50SW2-HF

Custom order products The warranty period of the custom order product is different from that of the CCS standard products. Contact our local sales office for details.

Lineup End of the model name: -WD: Wide type

Classification	Model Name *1	Input Voltage	Power Consumption				Options	Extension Cables	Recommended Control Units	Weight
			RD (Red)	SW (White)	BL (Blue)	GR (Green)				
Standard products	LDR2-32 □□ 2	24 V	1.6 W	1.9 W	1.9 W	1.9 W	Diffusion Plate, Polarizing Plate, Adapter, Lens attachment ring	FCB*4 Straight Cable	PD4	30 g
	LDR2-42 □□ 2	24 V	2.1 W	2.7 W	2.7 W	2.7 W	Diffusion Plate, Polarizing Plate, Adapter		PD3	50 g
	LDR2-50 □□ 2	24 V	3.1 W	3.8 W	3.8 W	3.8 W	Diffusion Plate, Polarizing Plate	FCB-W*5 2-Branch Cable	CC-ST-1024	50 g
	LDR2-50RD2-WD	24 V	3.1 W	-	-	-	Adapter, Lens attachment ring		POD*2	120 g *RD is 110 g
	LDR2-70 □□ 2	24 V	6.1 W	7.6 W	7.6 W	7.6 W	Diffusion Plate, Polarizing Plate	FCB-F 4-Branch Cable	POD*2	110 g
	LDR2-70RD2-WD	24 V	6.1 W	-	-	-				170 g
	LDR2-90 □□ 2	24 V	11 W	14 W	14 W	14 W	Diffusion Plate, Polarizing Plate	FCRB Robot Cable	PD4	220 g
	LDR2-90RD2-WD	24 V	11 W	-	-	-				
	LDR2-90-30 □□ 2	24 V	14 W	18 W	17 W	17 W	Diffusion Plate, Polarizing Plate, Adapter	*4 The cables with a model name that ends with "-ME7", "-EL2", "-PF", or "-PF-EL9" are not included. *5 The cables with a model name that ends with "-EL2" are not included.	510 g	
	LDR2-120 □□ 2	24 V	-	28 W	26 W	26 W	Adapter		510 g	
LDR2-120RD2-WD	24 V	24 W	-	-	-					
Custom order products	LDR2-32 □□ 2-HF	24 V	*3	1.2 W	*3	*3	*3	FCB*4 Straight Cable	PD4	*3
	LDR2-50 □□ 2-HF	24 V	*3	1.9 W	1.9 W	*3			PD3	
	LDR2-70 □□ 2-HF	24 V	*3	3.5 W	3.5 W	*3			CC-ST-1024, POD	

Extension Cables ▶ P.371

Control Unit Selection Guide ▶ P.305

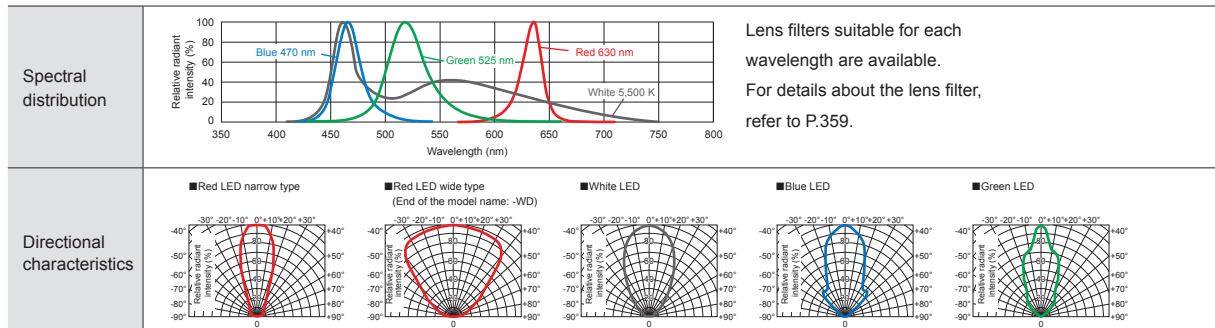
List of Control Unit Specifications ▶ P.307

*1 □□ in the model name contains the LED color. (RD: Red, SW: White, BL: Blue, GR: Green)

*2 For information on the combination of light units and POD Series control unit, please refer to our website. <https://www.ccs-grp.com/lnk/qr/pod>

*3 This product is custom-made. Contact our local sales office for details.

LED Properties



Lens filters suitable for each wavelength are available. For details about the lens filter, refer to P.359.

Be sure to read the User Manual included with the product before use and follow the safety precautions upon use. The data included is for reference only. Actual values may vary.

Options



Can prevent glare, which is a problem when making images of glossy workpieces.

Diffusion plate

An adapter is required when installing a diffusion plate.

Model name	Applicable Light Unit (Common for all colors)
DF-LDR-32	LDR2-32
DF-LDR-42	LDR2-42
DF-LDR-50	LDR2-50
DF-LDR-70*1	LDR2-70
DF-LDR-90	LDR2-90
DF-LDR-90-H28*2	LDR2-90-30
DF-LDR-120-45	LDR2-120

*1 DF-LDR-70 does not require an adapter. It is fixed to direct lighting.

*2 This is a custom order product. Contact our local sales office for details.

▶ P.363



Use with a polarizing filter to remove the light's surface reflection.

Polarizing plate

An adapter is required when installing a polarizing plate.

Model name	Applicable Light Unit (Common for all colors)
PL-LDR-32	LDR2-32
PL-LDR-42	LDR2-42
PL-LDR-50	LDR2-50
PL-LDR-70*1	LDR2-70
PL-LDR-90	LDR2-90
PL-LDR-90-H28*2	LDR2-90-30
PL-LDR-120-40	LDR2-12

*1 PL-LDR-70 comes with a mounting adapter.

*2 This is a custom order product. Contact our local sales office for details.

▶ P.365



Use when installing a diffusion plate or polarizing plate to the light unit.

Adapter

Model name	Applicable Light Unit (Common for all colors)
AD-LDR-32	LDR2-32
AD-LDR-42	LDR2-42
AD-LDR-50	LDR2-50
AD-LDR-90	LDR2-90 LDR2-90-30
AD-LDR-120	LDR2-120

▶ P.368



Light can be directly mounted to the filter thread of the lens. Suitable for environments with limited installation space.

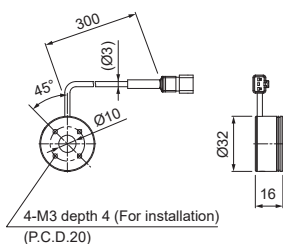
Lens attachment ring

Model name	Note	Applicable Light Unit (Common for all colors)
MR-LDR-32-M25	M25.5 P0.5	LDR2-32
MR-LDR-32-M27	M27.0 P0.5	
MR-LDR-32-M30	M30.5 P0.5	
MR-LDR-50-M25	M25.5 P0.5	LDR2-50
MR-LDR-50-M27	M27.0 P0.5	
MR-LDR-50-M30	M30.5 P0.5	

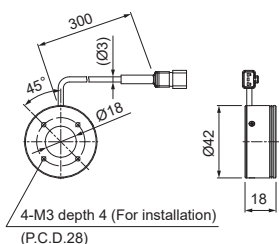
▶ P.368

Dimensions (mm)

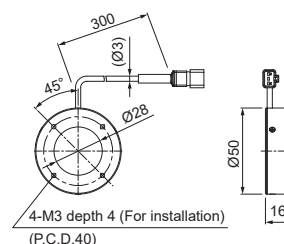
LDR2-32RD2/SW2/BL2/GR2



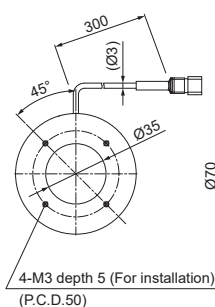
LDR2-42RD2/SW2/BL2/GR2



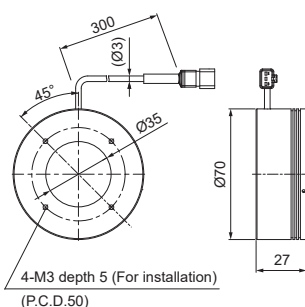
LDR2-50RD2/RD2-WD/SW2/BL2/GR2



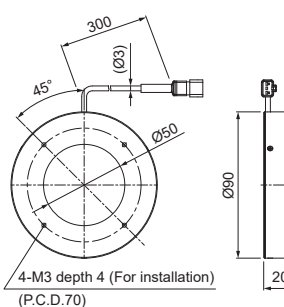
LDR2-70RD2/RD2-WD



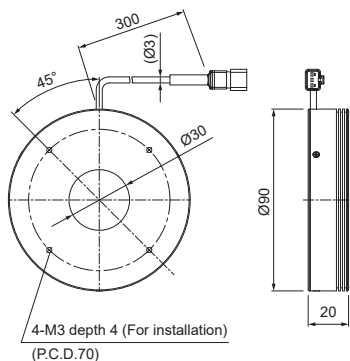
LDR2-70SW2/BL2/GR2



LDR2-90RD2/RD2-WD/SW2/BL2/GR2

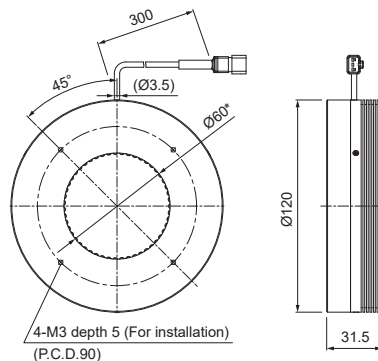


LDR2-90-30RD2/SW2/BL2/GR2



The cable diameter of LDR2-90-30SW2/BL2/GR2 is Ø3.5.

LDR2-120RD2-WD/SW2/BL2/GR2



* The inside diameter will be around Ø56 mm due to the protruding LED.

You can change the connectors of the light unit cable. Choose between M12 connectors and flying leads. Refer to P.19 for details.

Model name	Ring Type
LDR2	Ring (Direct)
LDR2-LA	Ring (Direct)
LDR-LA1	Ring (Direct)
SQR	Ring (Direct)
SQR-TP	Ring (Direct)
HLDR3	Ring (Convergent/Diffused)
HPR2	Ring (Convergent/Diffused)
LFR	Ring (Convergent/Diffused)
LKR	Ring (Convergent/Diffused)
FPR	Ring (Convergent/Diffused)
FPQ3	Square
LDL2	Bar
LDLB	Bar
HLDL3	Bar
LB	Bar
TH2 (5 types)	Flat
LFL	Flat
HPD2	Dome
LDM2	Dome
LAV	Dome
PDM	Dome
LFXV	Dome
LFX3	Dome
LFX3-PT	Dome
LFV3	Coaxial
LFV3-G	Coaxial
MSU	Coaxial
MFU	Coaxial
PF	Strobe
HLDR-IP	Water-proof
HSL-PCL	Water-proof
Small COB Lights	COB
UV3/VL3	UV / Violet
UV	UV / Violet
LNSP-UV3-FN	UV / Violet
IR2 (Under 1000-nm Type)	Infrared
IF (Over 1000-nm Type)	Infrared
CIR	Infrared
IU	Intensity Control
HLV3	Spot, Etc.
LV	Spot, Etc.
LSP	Spot, Etc.
HFS/HFR	Spot, Etc.
HLV3-22-4-NR	Spot, Etc.
HLV3-3M-RGB-4	Spot, Etc.
PFBR-600SW2	Spot, Etc.
PFBR-150	Spot, Etc.
PFBR3	Spot, Etc.
LNL	Line (Convergent)
LNSP2	Line (Convergent)
Coaxial Units	Line (Convergent)
LNSP-FN	Line (Convergent)
LN/LN-HK	Line (Convergent)
LNSD	Line (Diffused)
LND2	Line (Diffused)
LT	Line (Diffused)
LNV	Line (Diffused)
LFXV (Rectangular Type)	Line (Diffused)
TH2 (Rectangular Type)	Line (Diffused)
LNDG	Line (Oblique Angled)
LNSI2	Line (Oblique Angled)
LNIS	Line (Oblique Angled)
LNIS-FN	Line (Oblique Angled)
Telecentric Lens	Lenses
Macro Lens	Lenses

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