



Provides direct light at a low angle from an emitting part directed horizontally



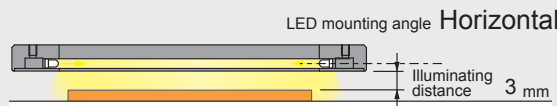
Applications

Edge detection; inspection for engraving, damage, or stains on metal surfaces; inspection for foreign material on wafers; inspection of bonding on shrink film; engraved character recognition for rubber; etc.

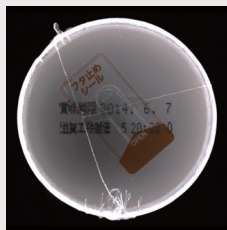
➤ Illuminating Closest to the Workpiece

It's capable of illuminating the workpiece from a shorter distance than the LDR2-LA Series. Suitable for imaging fine unevenness, scratches and engraved letters.

Imaging example for the LDR-206SW2-LA1:
Imaging the appearance of food containers

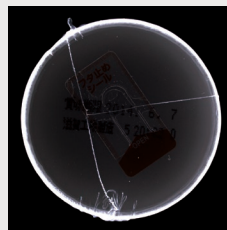


LDR2-208SW2-LA



The seal and engraved text affect the image, and the shrink seal cannot be sufficiently detected.

LDR-206SW2-LA1

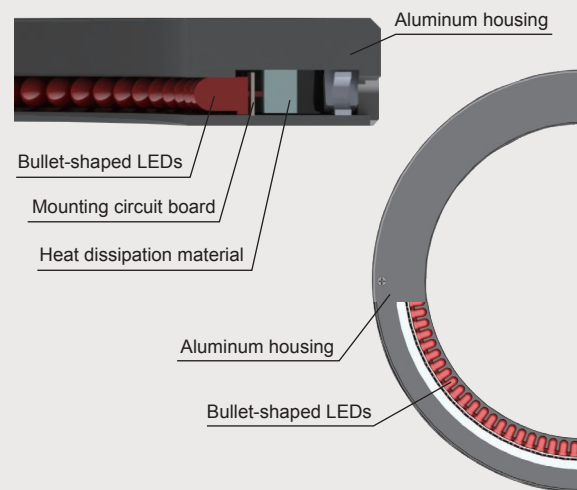


Only the shrink seal clearly stands out.

➤ LEDs Mounted Horizontally

Achieved a thin device that is 10 mm thick by mounting LEDs horizontally in one line. Helps save space because it can be installed near the workpiece.

Cross-section image of the LDR-146-LA1



➤ Custom Order Example

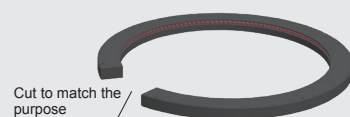
Please contact your CCS sales representative.

E.g.: Changed the format to take measures against interference with the device

Customizable items

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

Created a light unit with a shape to match the purpose

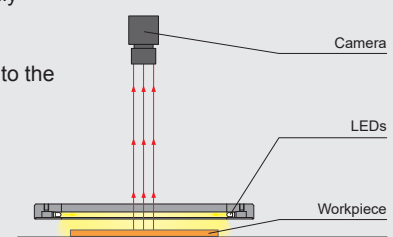


Cut to match the purpose

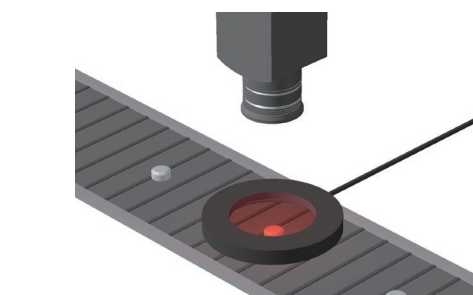
➤ Example Configuration

LEDs are arranged facing horizontally in a ring shape. It can be used extremely close to the workpiece.

LDR-146-LA1



➤ Imaging Example: Imaging the Appearance of Button Cell Batteries



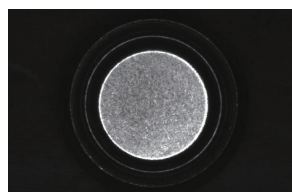
Description	Visual inspection
Workpiece	Button cell batteries
Conventional lighting	LED Ring Light
New lighting	LDR-75RD2-LA1
Result	Extracting the damage

Workpiece image



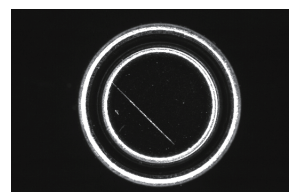
Button cell batteries

LED Ring Light



It is difficult to get an image of the button cell battery outside or damage on the surface.

LDR-75RD2-LA1



It is possible to clearly get an image of the outside and damage on the surface.

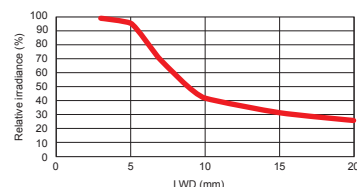
➤ Data: Relative Irradiance Graph and Uniformity (Representative Example)

The data included is for reference only and does not guarantee the quality of this product.

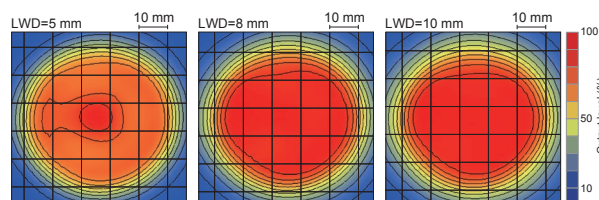
LDR-75RD2-LA1

Relative irradiance graph^{*1}
(LWD characteristics)^{*2}

^{*1} Irradiance on the optical axis
^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)



➤ Lineup

Model Name ^{*1}	Input Voltage	Power Consumption				Options	Extension Cables	Recommended Control Units	Weight
		RD (Red)	SW (White)	BL (Blue)	GR (Green)				
LDR-75□□2-LA1	24 V	2.6 W	3.8 W	3.8 W	3.8 W	Bracket	FCB ^{*3} Straight Cable FCB-W ^{*4} 2-Branch Cable FCB-F 4-Branch Cable FRCB Robot Cable	PD4 PD3 CC-ST-1024 POD ^{*2}	55 g
LDR-96□□2-LA1	24 V	3.1 W	3.8 W	3.8 W	3.8 W				100 g
LDR-146□□2-LA1	24 V	4.6 W	6.0 W	6.1 W	6.1 W				160 g ^{*RD is 170 g}
LDR-176□□2-LA1	24 V	6.1 W	7.6 W	7.6 W	7.6 W				205 g ^{*RD is 210 g}
LDR-206□□2-LA1	24 V	7.1 W	9.1 W	9.1 W	9.1 W				220 g ^{*RD is 250 g}

Extension Cables ▶ P.361

Control Unit Selection Guide ▶ P.285

List of Control Unit Specifications ▶ P.287

^{*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/q/pod>

You can inquire
using our website.

Sample
Testing

Light Unit
Selection

Free Product
Trial

Custom
Orders

Product
Details

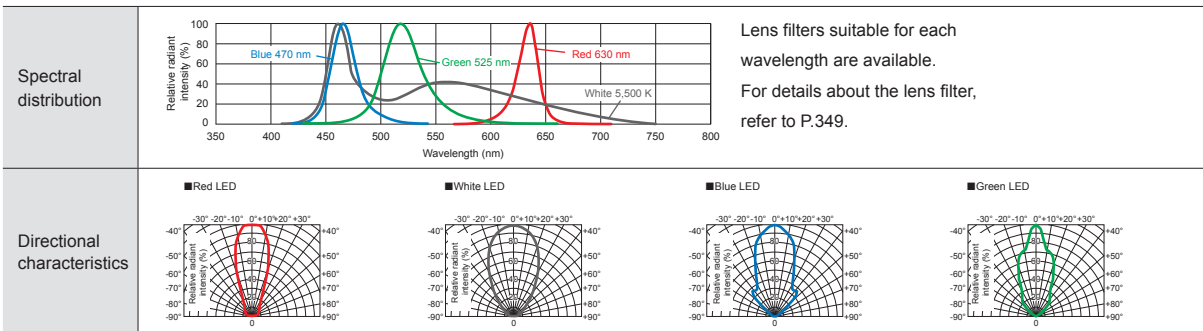
Pricing/
Quotation

Discontinued
Products

Inquire on our website here.
<https://www.ccs-grp.com/contact/>



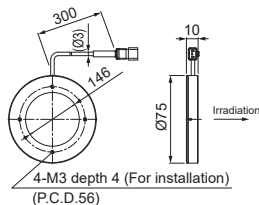
LED Properties



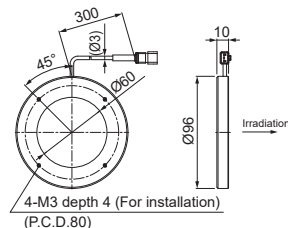
Be sure to read the User Manual included with the product before use and follow the safety precautions upon use.
The data included is for reference only. Actual values may vary.

Dimensions (mm)

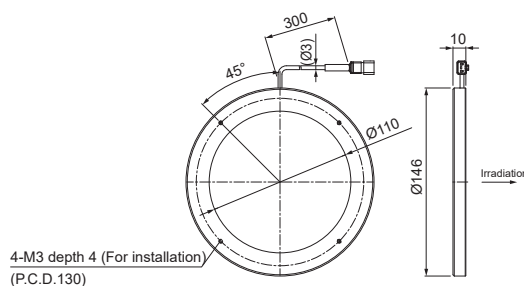
LDR-75RD2-LA1 / SW2-LA1 / BL2-LA1 / GR2-LA1



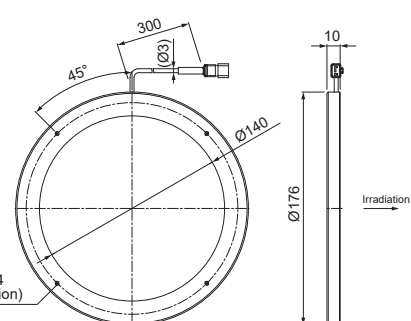
LDR-96RD2-LA1 / SW2-LA1 / BL2-LA1 / GR2-LA1



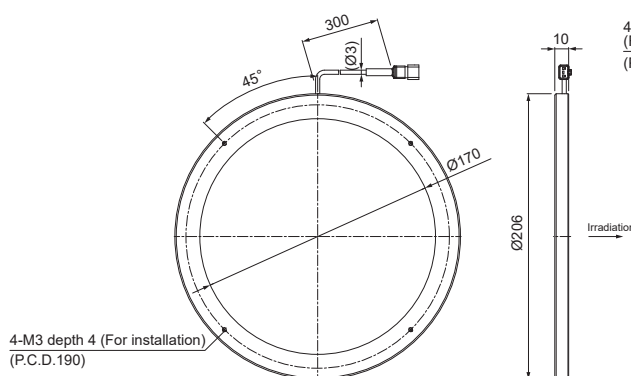
LDR-146RD2-LA1 / SW2-LA1 / BL2-LA1 / GR2-LA1



LDR-176RD2-LA1 / SW2-LA1 / BL2-LA1 / GR2-LA1



LDR-206RD2-LA1 / SW2-LA1 / BL2-LA1 / GR2-LA1



You can change the connectors of the light unit cable. Choose between M12 connectors and flying leads. Refer to P.7 for details.

Options



Combine with the Dome Light HPD2 Series to achieve imaging by light switching and simultaneous lighting.

Light joint bracket

Model name	Applicable Light Unit 1 (Common for all colors)	Applicable Light Unit 2 (Common for all colors)
BK-75-JO	LDR-96-LA1	HPD2-75
BK-100-JO	LDR-146-LA1	HPD2-100
BK-150-JO	LDR-176-LA1	HPD2-150
BK-200-JO	LDR-206-LA1	HPD2-200

P.360