


Low-angle Ring Lights

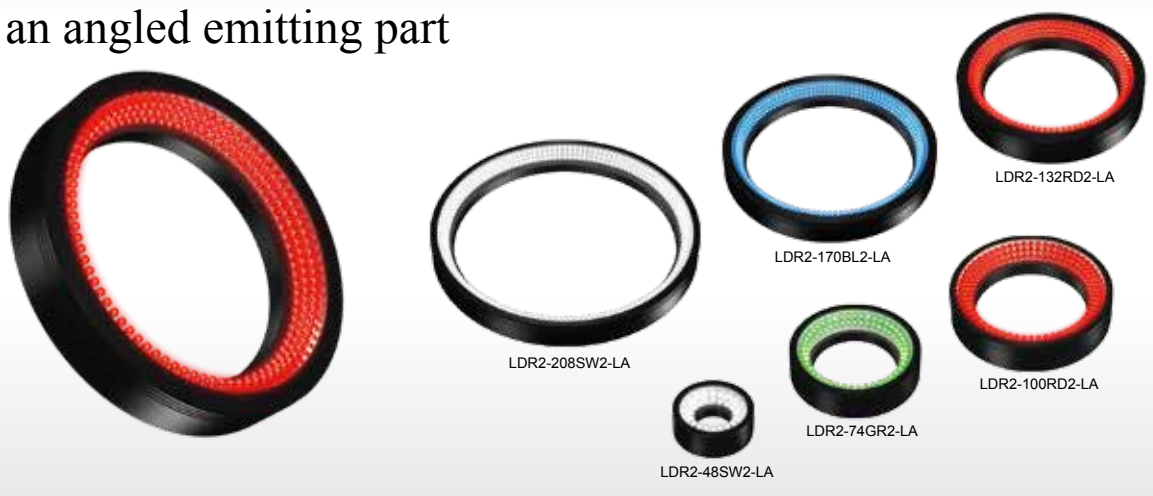
LDR2-LA series

Refer to our website for product details.

CCS LDR2-LA  You can also use your smartphone or cell phone.

Use a search engine.

Provides direct light at a low angle from an angled emitting part

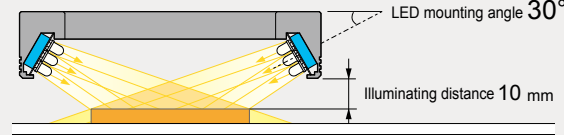


Applications Inspection for engraving, damage, or stains on metal surfaces, edge extraction, inspection for foreign material mixed with medicine, inspection for damage to glass edges, and visual inspection for O-rings, etc.

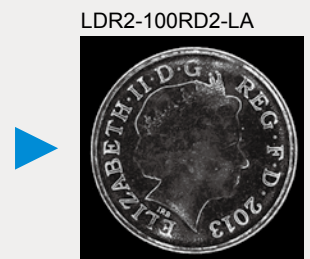
Extraction of uneven damage or engravings

Providing direct light from a low angle to the center section allows for an image that emphasizes the workpiece's characteristic features.

Imaging example for the LDR2-100RD2-LA:
Exterior imaging of a coin



LDR2-90RD2
Edge extraction is difficult with illumination from a high angle.

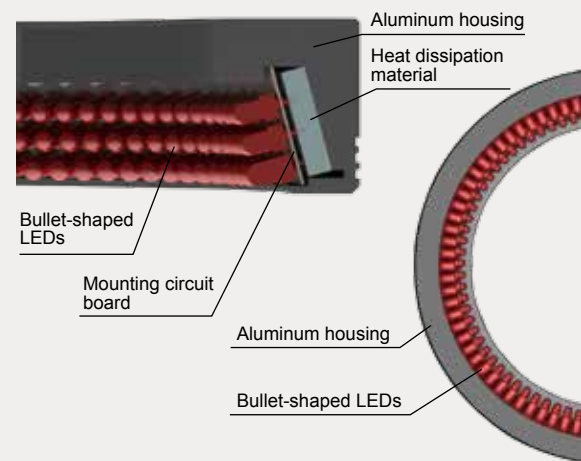


LDR2-100RD2-LA
Illuminating from a low angle allows for imaging that emphasizes the edges.

Illuminates from a low-angle at a steep slope

By mounting LEDs on a flexible circuit board in a steep angle, it becomes possible to converge light in the center section from a low position.

Cross-section image of the LDR2-132-LA



Custom orders

Please contact your CCS sales representative.
E.g.: Different shape

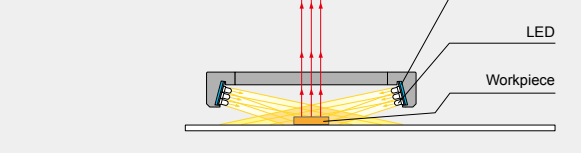
Customizable items

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

Example: Create a Light Unit with a large size (ø290)

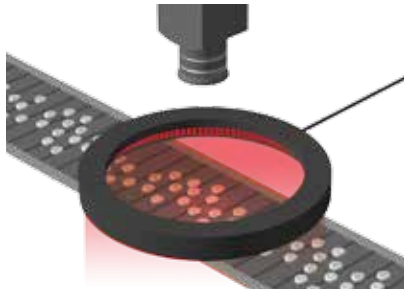
Example configuration

Using a flexible circuit board to create any angle needed. Illuminates direct light to the center from a low angle.



LDR2	Direct Lighting
LDR2-LA	Direct Lighting
LDR-LA1	Direct Lighting
SQR	Direct Lighting
SQR-TP	Direct Lighting
HLDR-IP	Convergent Lighting
HPR2	Diffused Lighting
HPR	Diffused Lighting
LFR	Diffused Lighting
LKR	Diffused Lighting
FPR	Diffused Lighting
FPQ2	Diffused Lighting
LDL2	Direct Lighting
LDLB	Direct Lighting
HLDL2	Direct Lighting
TH	Direct Lighting
LFL	Direct Lighting
HPD2	Direct Lighting
HPD	Direct Lighting
LDM2	Diffused Lighting
LAV	Diffused Lighting
PDM	Diffused Lighting
LFX2	Diffused Lighting
LFV3	Diffused Lighting
LFV2	Diffused Lighting
MSU	Collimated Lighting
MFU	Collimated Lighting
UV2	Ultraviolet Lighting
UV	Ultraviolet Lighting
LNSP-UV-FN	Ultraviolet Lighting
IR2	Infrared Lighting
HLV2	Spot Lighting, Etc.
LV	Spot Lighting, Etc.
LSP	Spot Lighting, Etc.
HFS/HFR	Spot Lighting, Etc.
HLV2-NR	Spot Lighting, Etc.
HLV2-3M-RGB-3W	Spot Lighting, Etc.
PFB2	Spot Lighting, Etc.
PFBR	Spot Lighting, Etc.
LNSP	Convergent Lighting
CU-LNSP	Convergent Lighting
LNSP-FN	Convergent Lighting
LN/LN-HK	Convergent Lighting
LNLD	Diffused Lighting
LND2	Diffused Lighting
HLND	Diffused Lighting
LT	Diffused Lighting
LNW/HLDN	Diffused Lighting
LNIS	Oblique Angled Lighting
LNIS-FN	Oblique Angled Lighting
Telecentric Lens	Lenses
Macro Lens	Lenses

➤ Imaging example : Text on tablets, exterior imaging



Description	Text, visual inspection
Workpiece	Tablet
Before the proposal	Interior lamp
After the proposal	LDR2-170RD2-LA
Result	Emphasizes text and edge of the exterior

Workpiece image



Tablet

Interior lamp



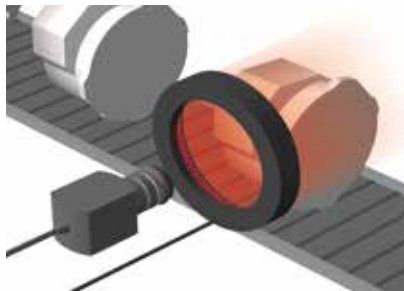
It is difficult to take an image that emphasizes the text or exterior.

LDR2-170RD2-LA



Possible to take an image that emphasizes the text or exterior.

➤ Imaging example : Imaging of engraved text on a metal block (stain finishing)



Description	Character recognition
Workpiece	Metal block
Before the proposal	LED Dome Light
After the proposal	LDR2-132RD2-LA
Result	Extracts only the engraved text

Workpiece image



Metal block (stain finishing)

LED Dome Light



The whole thing is illuminated, making it difficult to emphasize only the characters.

LDR2-132RD2-LA



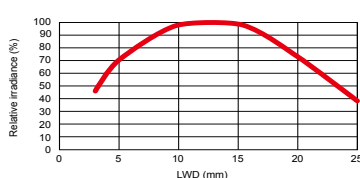
Reduces effects from the stain finishing, making it possible to emphasize the characters.

➤ Data: Relative irradiance graph/Uniformity graph (Representative example)

LDR2-74RD2-LA

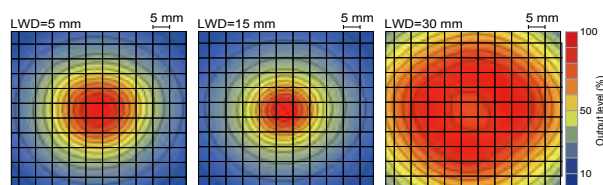
Relative irradiance graph^{*1} (LWD Characteristics)^{*2}

*1: Irradiance on the optical axis
*2: Illuminating distance from the Light Unit to the workpiece



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

Uniformity graph (Relative irradiance)



LDR2-LA series



Refer to our website for product details.

CCS LDR2-LA

Search



You can also use your smartphone or cell phone.

Use a search engine.

Lineup

Model name	LED color	Power consumption	Peak wavelength/ correlated color temperature	Options	Recommended Control Units	Weight				
LDR2-48RD2-LA	Red	24 V / 2.1 W	630 nm	Diffusion plate	<table border="1"> <tr> <td>PD3</td> <td>CC-ST-1024</td> </tr> <tr> <td>PSB</td> <td>PTU2</td> </tr> </table>	PD3	CC-ST-1024	PSB	PTU2	50 g
PD3	CC-ST-1024									
PSB	PTU2									
LDR2-48SW2-LA	White	24 V / 3.1 W	5,500 K							
LDR2-48BL2-LA	Blue		470 nm							
LDR2-48GR2-LA	Green		525 nm							
LDR2-74RD2-LA	Red	24 V / 4.6 W	630 nm	Diffusion plate	<table border="1"> <tr> <td>PD3</td> <td>CC-ST-1024</td> </tr> <tr> <td>PSB</td> <td>PTU2</td> </tr> </table>	PD3	CC-ST-1024	PSB	PTU2	90 g
PD3	CC-ST-1024									
PSB	PTU2									
LDR2-74SW2-LA	White	24 V / 5.7 W	5,500 K							
LDR2-74BL2-LA	Blue		470 nm							
LDR2-74GR2-LA	Green		525 nm							
LDR2-100RD2-LA	Red	24 V / 9.1 W	630 nm	Diffusion plate	<table border="1"> <tr> <td>PD3</td> <td></td> </tr> <tr> <td>PSB</td> <td>PTU2</td> </tr> </table>	PD3		PSB	PTU2	170 g
PD3										
PSB	PTU2									
LDR2-100SW2-LA	White	24 V / 12 W	5,500 K							
LDR2-100BL2-LA	Blue		470 nm							
LDR2-100GR2-LA	Green		525 nm							
LDR2-132RD2-LA	Red	24 V / 13 W	630 nm	Diffusion plate	<table border="1"> <tr> <td>PD3</td> <td></td> </tr> <tr> <td>PSB</td> <td>PTU2</td> </tr> </table>	PD3		PSB	PTU2	270 g
PD3										
PSB	PTU2									
LDR2-132SW2-LA	White	24 V / 16 W	5,500 K							
LDR2-132BL2-LA	Blue		470 nm							
LDR2-132GR2-LA	Green		525 nm							
LDR2-170RD2-LA	Red	24 V / 18 W	630 nm	Diffusion plate	<table border="1"> <tr> <td>PD3</td> <td></td> </tr> <tr> <td>PSB</td> <td>PTU2</td> </tr> </table>	PD3		PSB	PTU2	350 g
PD3										
PSB	PTU2									
LDR2-170SW2-LA	White	24 V / 22 W	5,500 K							
LDR2-170BL2-LA	Blue		470 nm							
LDR2-170GR2-LA	Green		525 nm							
LDR2-208RD2-LA	Red	24 V / 22 W	630 nm	Diffusion plate	<table border="1"> <tr> <td>PD3</td> <td></td> </tr> <tr> <td>PSB</td> <td>PTU2*</td> </tr> </table>	PD3		PSB	PTU2*	380 g
PD3										
PSB	PTU2*									
LDR2-208SW2-LA	White	24 V / 28 W	5,500 K							
LDR2-208BL2-LA	Blue		470 nm							
LDR2-208GR2-LA	Green		525 nm							

Extension Cables ▶ P.222

Control Unit Selection Guide ▶ P.181

Control Unit Page ▶ P.185

LED properties

Light spectrum

If using a sharp-cut filter, please use the R60 (option). For details about the sharp-cut filter, refer to P.215.

Directional characteristics

■ Red LED

■ White LED

■ Blue LED

■ Green LED

Be sure to read the "Instruction Guide" included with the product before use and observe cautionary information. The data included is for reference only and does not guarantee the quality of this product.

Options



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

Diffusion plate

Model name	Applicable Light Unit (Common for all colors)
DF-LDR-48LA	LDR2-48-LA
DF-LDR-74LA	LDR2-74-LA
DF-LDR-100LA	LDR2-100-LA
DF-LDR-132LA	LDR2-132-LA
DF-LDR-170LA	LDR2-170-LA
DF-LDR-208LA	LDR2-208-LA

▶ P.216

We have various materials.

PDF Drawings

DXF Drawings

3D CAD

Instruction Guides

Product Filers

Imaging Samples

Data Sheets

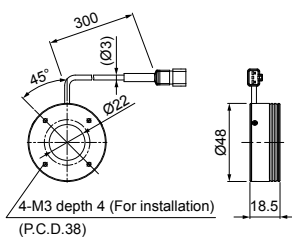
Examples of Custom Ordered Products

Download here.

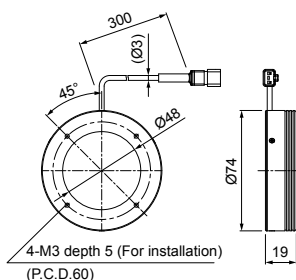
<http://www.ccs-grp.com/dl/>

► Dimensions (mm)

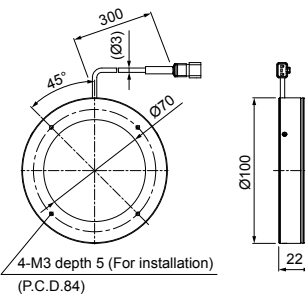
LDR2-48RD2-LA/SW2-LA/BL2-LA/GR2-LA



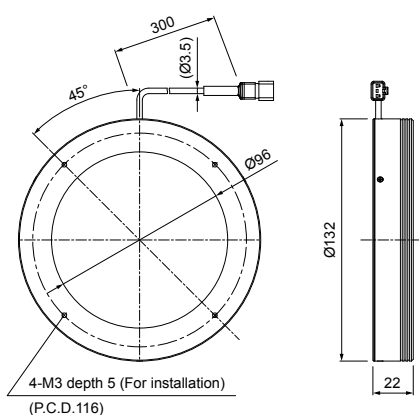
LDR2-74RD2-LA/SW2-LA/BL2-LA/GR2-LA



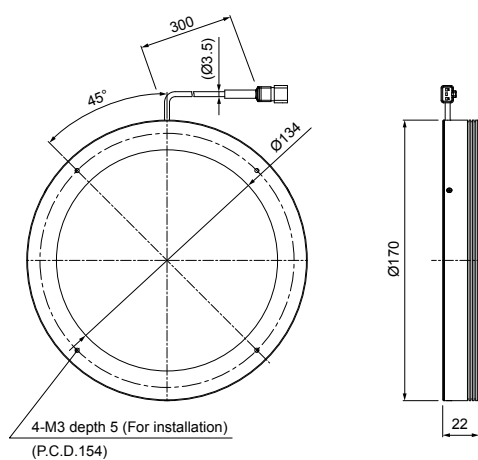
LDR2-100RD2-LA/SW2-LA/BL2-LA/GR2-LA



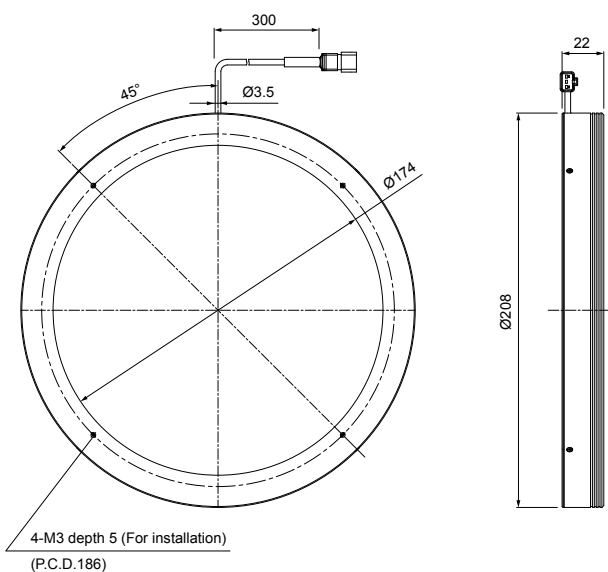
LDR2-132RD2-LA/SW2-LA/BL2-LA/GR2-LA



LDR2-170RD2-LA/SW2-LA/BL2-LA/GR2-LA



LDR2-208RD2-LA/SW2-LA/BL2-LA/GR2-LA



You can change the connectors of the Light Unit cable. Choose between M12 connectors and flying leads. Refer to P.125 for details.

You can inquire using
our website.

Requests for
Light Unit
Selection

Requests for
Loan
Products

Requests for
Estimates

Requests for
a Catalog

Product
Inquiries

Other
Inquiries

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