

Low-angle Ring Lights

LDR2-LA series

Refer to our website for product details.

CCS LDR2-LA

Search



You can also use your smartphone or cell phone.

For quick access.

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



LDR2-208SW2-LA



LDR2-170BL2-LA



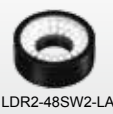
LDR2-132RD2-LA



LDR2-100RD2-LA



LDR2-74GR2-LA



LDR2-48SW2-LA

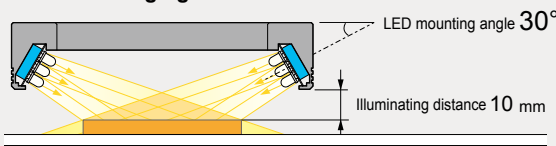
Applications

Inspection for engraving, damage, or stains on metal surfaces; edge extraction; inspection for foreign material mixed with medicine; inspection for damage to glass edges; 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.

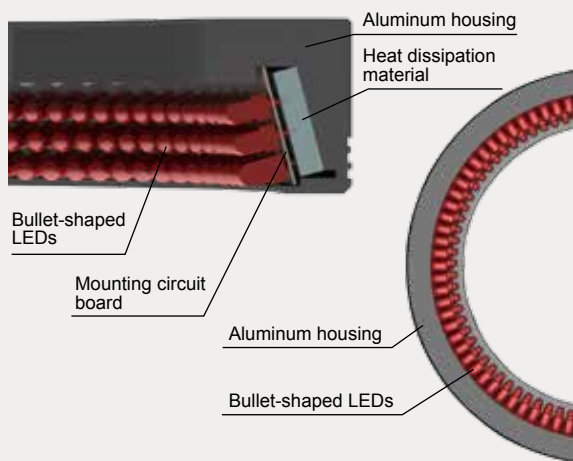


LDR2-100RD2-LA
Illuminating from a low angle allows for imaging that emphasizes the edges.

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.

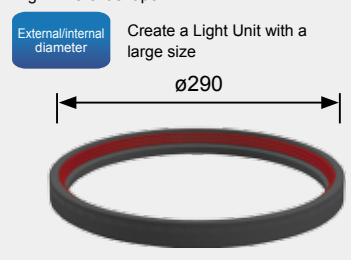
Cross-section image of the LDR2-132-LA



Custom orders

Please contact your CCS sales representative.

E.g.: Different shape

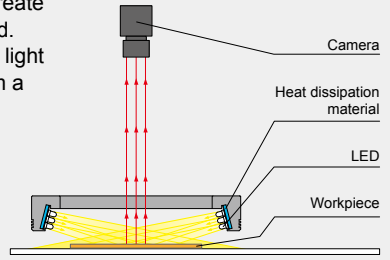


- Customizable items**
- External/internal diameter
 - Wavelength/Color
 - Increase output
 - Cable length
 - Illuminating angle
 - Format/material
 - Connector format
 - Installation/mounting
- Etc.

Example configuration

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

LDR2-132-LA



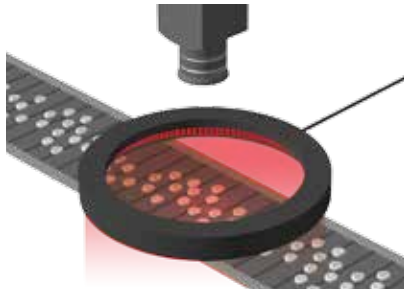
LDR2	Direct Lighting
LDR2-LA	Direct Lighting
LDR-LA1	Direct Lighting
SQR	Direct Lighting
SQR-TP	Direct Lighting
HPR2	Diffused Lighting
LFR	Diffused Lighting
LKR	Diffused Lighting
FPR	Diffused Lighting
FPQ2	Diffused Lighting
LDL2	Direct Lighting
LDLB	Direct Lighting
HLDL2	Direct Lighting
HL	Direct Lighting
TH2 (5 types)	Direct Lighting
TH	Direct Lighting
LFL	Direct Lighting
HPD2	Diffused Lighting
LDM2	Diffused Lighting
LAV	Diffused Lighting
PDM	Diffused Lighting
LFX3	Diffused Lighting
LFX3-PT	Diffused Lighting
LFX2	Diffused Lighting
LFV3	Diffused Lighting
MSU	Collimated Lighting
MFU	Collimated Lighting
PF	Strobe Lighting
HLDR-IP/ IQ/HSL-PCL	Water-proof
UV2	Ultraviolet Lighting
UV	Ultraviolet Lighting
LNSP-UV-FN	Ultraviolet Lighting
IR2	Infrared Lighting
IU	Intensity Control
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.
PFB2	Spot Lighting, Etc.
LNL2	Convergent Lighting
LN2P2	Convergent Lighting
LN2P	Convergent Lighting
Coaxial Units	Convergent Lighting
LN2P-FN	Convergent Lighting
LN/LN-HK	Convergent Lighting
LN2D	Convergent Lighting
LN2D2	Convergent Lighting
HLN2	Convergent Lighting
LT	Diffused Lighting
LN2V/HLN2	Diffused Lighting
LN2D2	Diffused Lighting
LN2S	Oblique Angled Lighting
LN2S-FN	Oblique Angled Lighting
Telecentric Lens	Lenses
Macro Lens	Lenses

Various technical documents available.

- 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/>

Imaging example : Text on tablets, exterior imaging



Description	Text, visual inspection
Workpiece	Tablet
Conventional lighting	Interior lamp
New lighting	LDR2-170RD2-LA
Result	Emphasizes text and edge of the exterior

Workpiece image



Tablet

Interior lamp



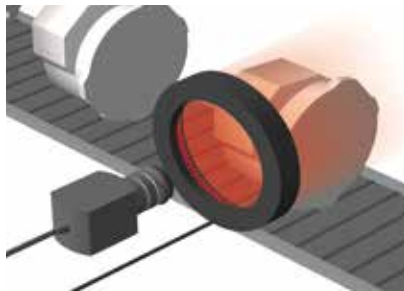
It is difficult to take an image that emphasizes the text or exterior.

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
Conventional lighting	LED Dome Light
New lighting	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.

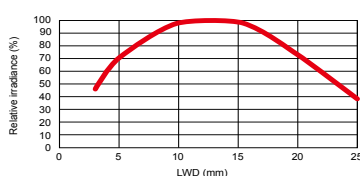
Data: Relative irradiance graph and uniformity (Representative example)

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

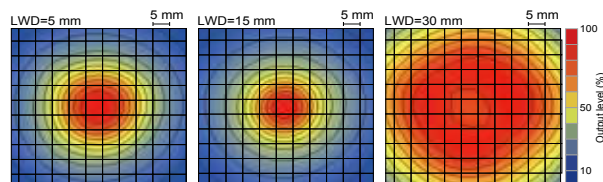
LDR2-74RD2-LA

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

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



Uniformity (Relative irradiance)



LDR2-LA series



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CCS LDR2-LA

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For quick access.

Lineup

Model name	LED color	Power consumption	Peak wavelength/ correlated color temperature	Options	Extension cables	Recommended Control Units	Weight	
LDR2-48RD2-LA	Red	24 V / 2.1 W	630 nm	Diffusion plate	FCB*2 Straight Cable	PD3 CC-ST-1024 PSB POD*1	50 g	
LDR2-48SW2-LA	White		5,500 K					
LDR2-48BL2-LA	Blue	24 V / 3.1 W	470 nm					
LDR2-48GR2-LA	Green		525 nm					
LDR2-74RD2-LA	Red	24 V / 4.6 W	630 nm					
LDR2-74SW2-LA	White		5,500 K					
LDR2-74BL2-LA	Blue	24 V / 5.7 W	470 nm					
LDR2-74GR2-LA	Green		525 nm					
LDR2-100RD2-LA	Red	24 V / 9.1 W	630 nm			FCB-W 2-branch Cable	PD3 PSB POD*1	170 g
LDR2-100SW2-LA	White		5,500 K					
LDR2-100BL2-LA	Blue	24 V / 12 W	470 nm					
LDR2-100GR2-LA	Green		525 nm					
LDR2-132RD2-LA	Red	24 V / 13 W	630 nm	FCB-F 4-branch Cable	PD3 PSB POD*1		270 g	
LDR2-132SW2-LA	White		5,500 K					
LDR2-132BL2-LA	Blue	24 V / 16 W	470 nm					
LDR2-132GR2-LA	Green		525 nm					
LDR2-170RD2-LA	Red	24 V / 18 W	630 nm		FRCB Robot Cable		PD3 PSB POD*1	350 g
LDR2-170SW2-LA	White		5,500 K					
LDR2-170BL2-LA	Blue	24 V / 22 W	470 nm					
LDR2-170GR2-LA	Green		525 nm					
LDR2-208RD2-LA	Red	24 V / 22 W	630 nm			FRCB Robot Cable	PD3 PSB POD*1	380 g
LDR2-208SW2-LA	White		5,500 K					
LDR2-208BL2-LA	Blue	24 V / 28 W	470 nm					
LDR2-208GR2-LA	Green		525 nm					

Extension Cables ▶ P.280

Control Unit Selection Guide ▶ P.229

List of Control Unit Specifications ▶ P.231

*1 For information on the combination of Light Units and POD-series Control Unit, please refer to our website. <http://www.ccs-grp.com/lnk/qr/rod>

LED properties

Spectral distribution

CCS offers you the most suitable lens filter for each wavelength. For details about the lens filter, refer to P.271.

Directional characteristics

Directional characteristics

Directional characteristics

Directional characteristics

Be sure to read the "Instruction Guide" 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

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.274

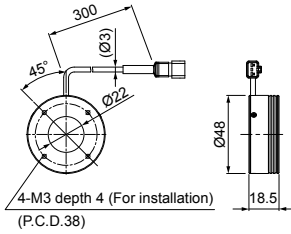
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- Data Sheets
- Examples of Custom Ordered Products

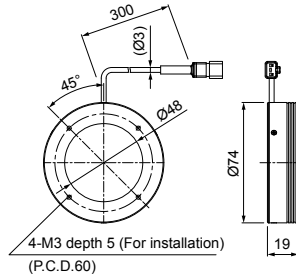
Download here. <http://www.ccs-grp.com/dl/>

► Dimensions (mm)

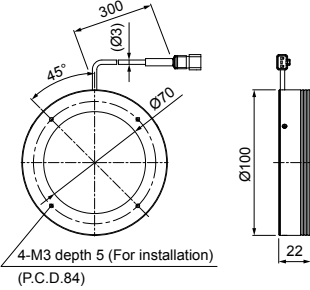
LDR2-48RD2-LA/SW2-LA/BL2-LA/GR2-LA



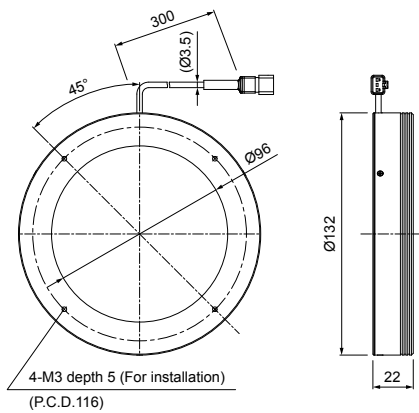
LDR2-74RD2-LA/SW2-LA/BL2-LA/GR2-LA



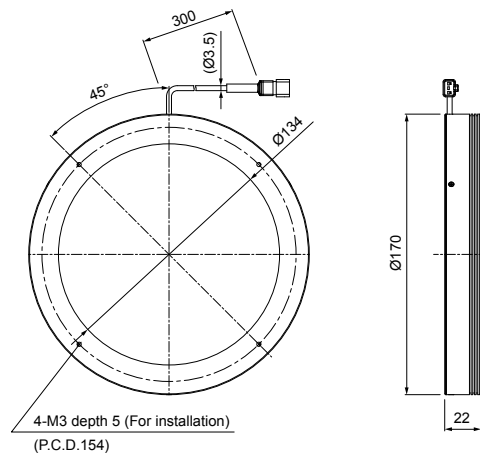
LDR2-100RD2-LA/SW2-LA/BL2-LA/GR2-LA



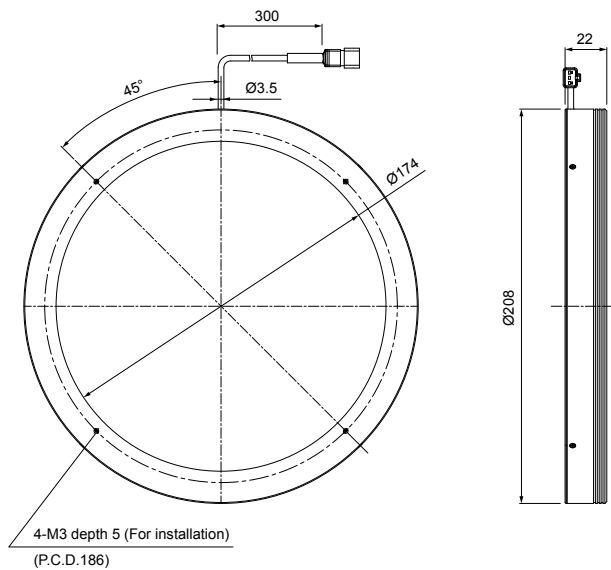
LDR2-132RD2-LA/SW2-LA/BL2-LA/GR2-LA



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.5 for details.

Direct Lighting
LDR2
LDR2-LA
LDR-LA1
SQR
SQR-TP

Diffused Lighting
HPR2
LFR
LKR
FPR
FPQ2

Direct Lighting
LDL2
LDLB
HLDL2
HL

TH2 (5 types)

TH
LFL

Diffused Lighting
HPD2
LDM2
LAV
PDM

LFX3
LFX3-PT
LFX2
LFV3

Climate Lighting
MSU
MFU

Strobe Lighting
PF

Water-proof
HLDR-IP/
IQ/HSL-PCL

Ultraviolet Lighting
UV2
UV
LNSP-UV-FN

Infrared Lighting
IR2

Intensity Control
IU

Spot Lighting, Etc.
HLV2
LV
LSP

HFS/HFR
HLV2-NR
HLV2-3M-RGB-3W
PFBR
PFB2

Convergent Lighting
LNLP
LNSP2
LNSP
Coaxial Units
LNSP-FN
LN/LN-HK

Diffused Lighting
LNSD
LND2
HLND
LT
LNV/HLDN

Oblique Angled Lighting
LNDG
LNIS
LNIS-FN

Lenses
Telecentric Lens
Macro Lens