

Low-angle Ring Lights

LDR-LA1 series

Refer to our website for product details.

CCS LDR-LA1

Search



You can also use your smartphone or cell phone.

Use a search engine.

Direct Lighting

Low-angle Ring Lights

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



Applications

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

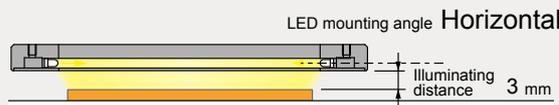
LDR-LA1 series

- LDR2
- LDR2-LA
- LDR-LA1
- SQR
- SQR-TP
- HLDR-IP
- HPR2
- HPR
- LFR
- LKR
- FPR
- FPO2
- LDL2
- HLDL2
- TH
- LFL
- HPD2
- HPD
- LDM2
- LAV
- PDM
- LFX2
- LFV3
- LFV2/LFV
- MSU
- MFU
- UV2
- UV
- LNSP-UV-FN
- IR
- HLV2
- LV
- LSP
- HFS/HFR
- HLV2-NR
- HLV2-3M- RGB-3W
- PFB2
- PFBR
- LNSP
- CU-LNSP
- LNSP-FN
- LN/LN-HK
- LND2
- HLND
- LT
- LNV
- Telecentric Lens
- Macro Lens

➤ Illuminating closest to the workpiece

Allows for illuminating closer to the workpiece than the LDR2-LA series. Perfect for imaging of minute unevenness, damage, or engraved characters.

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

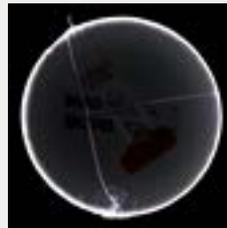


LDR2-208SW2-LA



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

LDR-206SW2-LA1

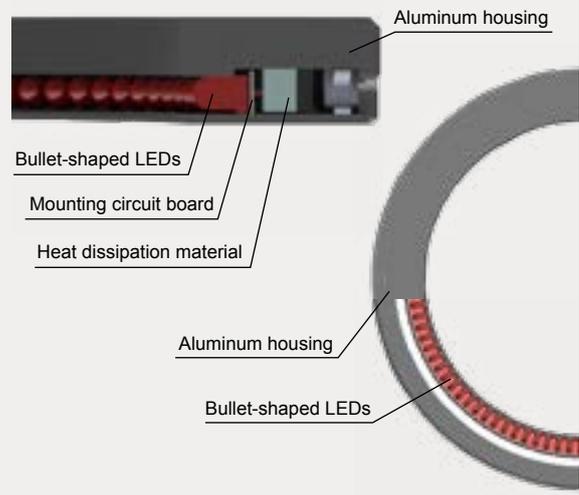


Only the shrink seal clearly stands out.

➤ 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 orders

Please contact your CCS sales representative.

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

Format/material Created a Light Unit with a shape to match the purpose



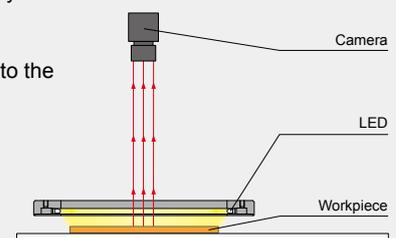
Customizable items

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

➤ Example configuration

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

LDR-146-LA1

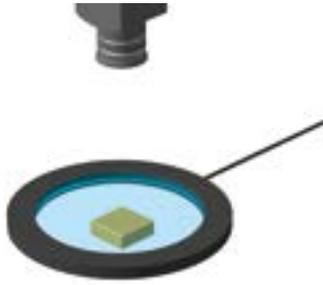


We have various materials.

- 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/>

➤ Imaging example : Exterior imaging of a plastic case surface



Description	Visual inspection
Workpiece	Plastic case
Before the proposal	Interior lamp
After the proposal	LDR-146BL2-LA1
Result	Extracting the damage

Workpiece image



Plastic case

Interior lamp



The whole thing is evenly illuminated, making it difficult to detect the damage.

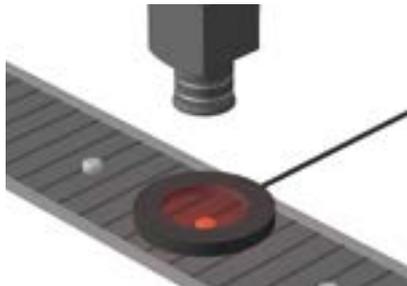
LDR-146BL2-LA1



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

LDR2
LDR2-LA
LDR-LA1
SQR
SQR-TP
HLDR-IP
HPR2
HPR
LFR
LKR
FPR
FPQ2
LDL2
HLDL2
TH
LFL
HPD2
HPD
LDM2
LAV
PDM
LFX2
LFV3
LFV2/LFV
MSU
MFU
UV2
UV
LNSP-UV-FN
IR
HLV2
LV
LSP
HFS/HFR
HLV2-NR
HLV2-3M- RGB-3W
PFB2
PFBR
LNSP
CU-LNSP
LNSP-FN
LNL/NL-HK
LND2
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➤ Imaging example : Exterior imaging of button batteries



Description	Visual inspection
Workpiece	Button battery
Before the proposal	LED Ring Light
After the proposal	LDR-75RD2-LA1
Result	Extracting the damage

Workpiece image



Button battery

LED Ring Light



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

LDR-75RD2-LA1



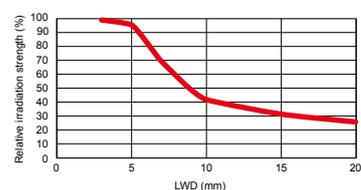
It is possible to clearly get an image of the outside and damage on the surface.

➤ Data: Relative irradiation strength graph/Uniformity graph (Representative example)

LDR-75RD2-LA1

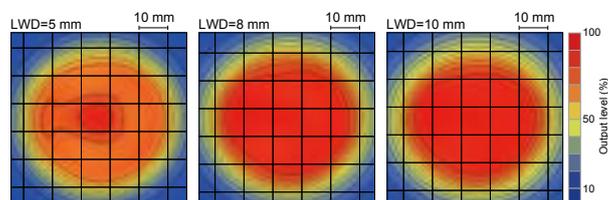
Relative irradiation strength graph (LWD Characteristics)^{*1}

*1: Irradiation strength 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 irradiation strength)



LDR-LA1 series



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CCS LDR-LA1

► Search



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Lineup

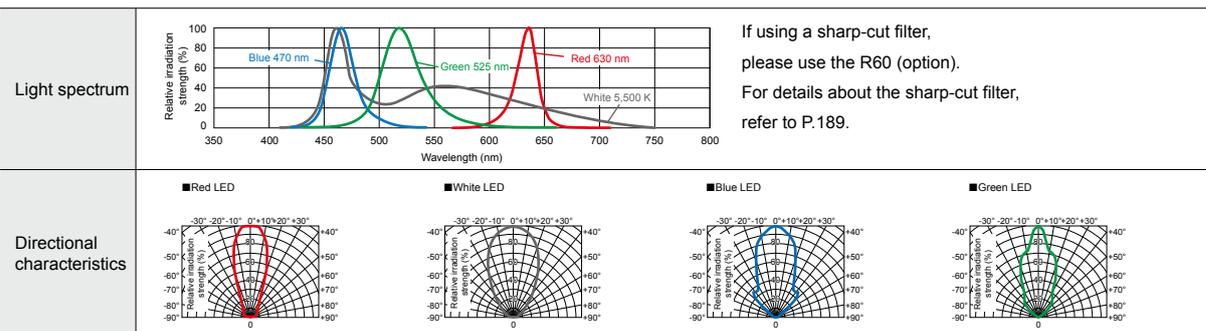
Model name	LED color	Power consumption	Peak wavelength/ correlated color temperature	Options	Recommended Control Units	Weight
LDR-75RD2-LA1	Red	24 V / 2.6 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">PTU2</div> </div>	55 g
LDR-75SW2-LA1	White		5,500 K			
LDR-75BL2-LA1	Blue		470 nm			
LDR-75GR2-LA1	Green		525 nm			
LDR-96RD2-LA1	Red	24 V / 3.1 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">PTU2</div> </div>	100 g
LDR-96SW2-LA1	White		5,500 K			
LDR-96BL2-LA1	Blue		470 nm			
LDR-96GR2-LA1	Green		525 nm			
LDR-146RD2-LA1	Red	24 V / 4.6 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">PTU2</div> </div>	170 g
LDR-146SW2-LA1	White		5,500 K			
LDR-146BL2-LA1	Blue		470 nm			
LDR-146GR2-LA1	Green		525 nm			
LDR-176RD2-LA1	Red	24 V / 6.1 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">PTU2</div> </div>	210 g
LDR-176SW2-LA1	White		5,500 K			
LDR-176BL2-LA1	Blue		470 nm			
LDR-176GR2-LA1	Green		525 nm			
LDR-206RD2-LA1	Red	24 V / 7.1 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">PTU2</div> </div>	250 g
LDR-206SW2-LA1	White		5,500 K			
LDR-206BL2-LA1	Blue		470 nm			
LDR-206GR2-LA1	Green		525 nm			

Extension Cables ► P.196

Control Unit Selection Guide ► P.155

Control Unit Page ► P.159

LED properties



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.

We have various materials.

PDF Drawings

DXF Drawings

3D CAD

Instruction Guides

Product Filers

Imaging Samples

Data Sheets

Examples of Custom Ordered Products

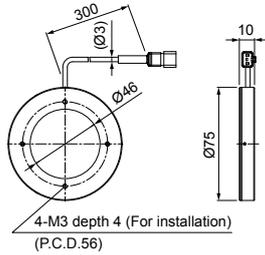
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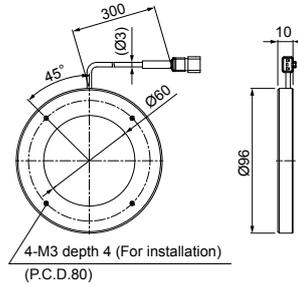
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- HPD2
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- LDM2
- LAV
- PDM
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- LFV3
- LFV2/LFV
- MSU
- MFU
- UV2
- UV
- LNSP-UV-FN
- IR
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- LNSP-FN
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➤ Dimensions (mm)

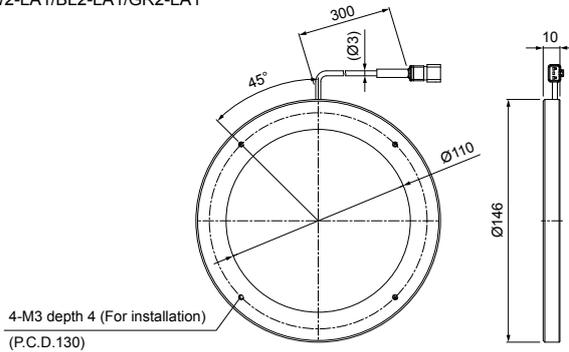
LDR-75RD2-LA1/SW2-LA1/BL2-LA1/GR2-LA1



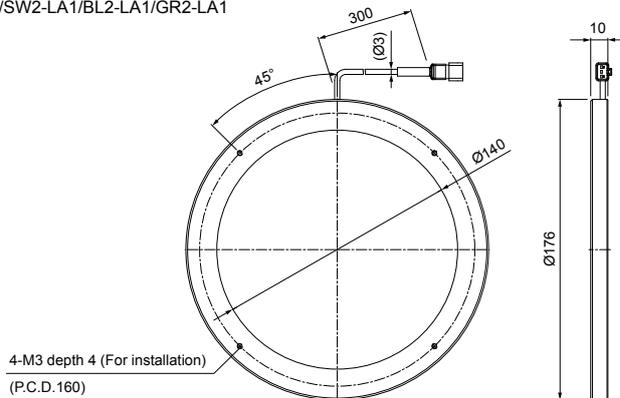
LDR-96RD2-LA1/SW2-LA1/BL2-LA1/GR2-LA1



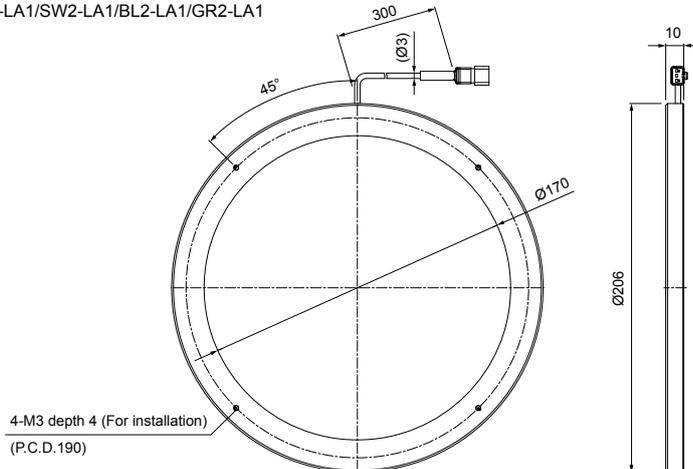
LDR-146RD2-LA1/SW2-LA1/BL2-LA1/GR2-LA1



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.115 for details.

Direct
Lighting

Low-angle Ring Lights

LDR-LA1
series

LDR2

LDR2-LA

LDR-LA1

SQR

SQR-TP

HLDR-IP

HPR2

HPR

LFR

LKR

FPR

FPQ2

LDL2

HLDL2

TH

LFL

HPD2

HPD

LDM2

LAV

PDM

LFX2

LFV3

LFV2/LFV

MSU

MFU

UV2

UV

LNSP-UV-FN

IR

HLV2

LV

LSP

HFS/HFR

HLV2-NR

HLV2-3M- RGB-3W

PFB2

PFBR

LNSP

CU-LNSP

LNSP-FN

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