LFR

SOR-TP HPR2

HLV2

PFBR PFB2 LNLP LNSP2

LNSP Coaxial Units LNSP-FN I N/I N-HK

LND2 HLND LT LNV/HLDN LNDG

LNIS2 LNIS LNIS-FN Telecentric Lens

### Macro Lens Various technical

Refer to our website for product details.

CCS LDR2 Search For quick access.

your smartphone or cell phone.

Provides direct light from an angled emitting part



Standard Ring Lights

boards, etc.

**Applications** 

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.

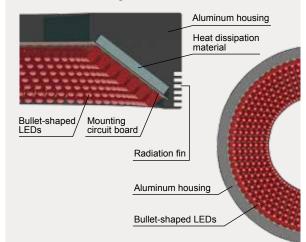
Flexible circuit board



## 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.

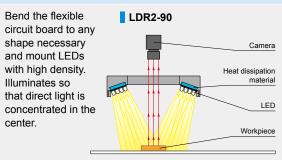
Cross-section image of the LDR2-120



### **Custom orders** Please contact your CCS sales representative.



### Example configuration



documents available.

Product Fliers

Data Sheets

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

LDR2-LA LDR-LA1 SQR SQR-TP

HPR2 LFR LKR FPR FPQ2 LDL2 Lighting HTDT5 HL

TH2 (5 types)

TH LFL HPD2

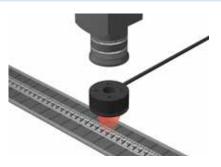
LDM2 LAV PDM LFX3 LFX3-PT LFX2 LFV3 Collimated Lighting MSU MSU Strobe Lighting

Mater IQ/HSL-PCL UV2

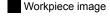
Infrared Lighting Intensity Control HLV2 LV LSP Etc.

LNSP-UV-FN

# Imaging example : Electrode imaging of electronic parts



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





Electronic part

LED Bar Light



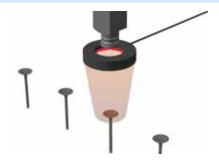
It's difficult to make an image of the electrode part using a Bar Light.

LDR2-32RD2



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

## Imaging example : Imaging text on an intake valve



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

#### Workpiece image



Intake valve

LED Ring Light



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

LDR2-50RD2



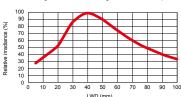
Allows for image that makes the character edges stand out.

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

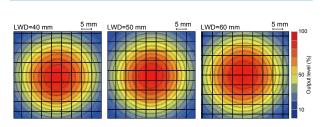
# Data: Relative irradiance graph and uniformity (Representative example)

# LDR2-50RD2 Relative irradiance graph (LWD Characteristics) 2

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



#### Uniformity (Relative irradiance)



You can inquire using our website.

Requests for Light Unit Selection

Requests for Loan

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

LNLP LNSP2 LNSP

HFS/HFR

PFBR

Coaxial Units LNSP-FN LN/LN-HK

LNSD LND2 HLND LT

LNV/HLDN LNDG LNDG LNIS2 LNIS LNIS-F

LNIS-FN Telecentric Lens Macro Lens

HLV2-NR HLV2-3M-RGB-3W PFBR PFB2 LNLP

LNSP2 LNSP Coaxial Units LNSP-FN LN/LN-HK

LND2 HLND LT LNV/HLDN LNDG

LNIS2 LNIS LNIS-FN Telecentric Lens

Macro Lens

LDR2 series



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

Model name	LED color	Power consumption	Peak wavelength/ correlated color temperature	Options	Extension cables	Recommended Control Units	Weight
LDR2-32RD2	Red	24 V / 1.6 W	630 nm	Diffusion slate			
LDR2-32SW2	White		5,500 K	Diffusion plate Polarizing plate	FCB*2 Straight Cable  FCB-W 2-branch Cable	PD3   CC-ST-1024   PSB   POD*1	30 g
LDR2-32BL2	Blue	24 V / 1.9 W	470 nm	Adapter  Lens attachment ring			
LDR2-32GR2	Green		525 nm	Lens attachment mig			
LDR2-42RD2	Red	24 V / 2.1 W	630 nm				50 g
LDR2-42SW2	White		5,500 K	Diffusion plate Polarizing plate			
LDR2-42BL2	Blue	24 V / 2.7 W	470 nm	Adapter			
LDR2-42GR2	Green		525 nm				
LDR2-50RD2	Ded	041//0410/	000				50 g
LDR2-50RD2-WD	Red	24 V / 3.1 W	630 nm	Diffusion plate			
LDR2-50SW2	White		5,500 K	Polarizing plate  Adapter			
LDR2-50BL2	Blue	24 V / 3.8 W	470 nm	Lens attachment ring			
LDR2-50GR2	Green		525 nm				
LDR2-70RD2	Ded	041//0410/	000				110 g
LDR2-70RD2-WD	Red	24 V / 6.1 W	630 nm				
LDR2-70SW2	White		5,500 K	Diffusion plate  Polarizing plate			120 g
LDR2-70BL2	Blue	24 V / 7.6 W	V 470 nm		4-branch Cable		
LDR2-70GR2	Green		525 nm		FRCB Robot Cable  "2 The cables with a model name that ends with "-MET" or "-EL2" are not included.		
LDR2-90RD2		0437744387				PD3	170 g
LDR2-90RD2-WD	Red	24 V / 11 W	630 nm				
LDR2-90SW2	White		5,500 K	Diffusion plate Polarizing plate			
LDR2-90BL2	Blue	24 V / 14 W	470 nm	Adapter			
LDR2-90GR2	Green		525 nm			PSB POD*1	
LDR2-90-30RD2	Red	24 V / 14 W	630 nm				220 g
LDR2-90-30SW2	White	24 V / 18 W	5,500 K				
LDR2-90-30BL2	Blue	04144714	470 nm	-			
LDR2-90-30GR2	Green	24 V / 17 W	525 nm				
LDR2-120RD2-WD	Red	24 V / 24 W	630 nm			PD3 PSB POD*1	510 g
LDR2-120SW2	White	24 V / 28 W	5,500 K	Diffusion plate			
LDR2-120BL2	Blue	041// 2011/	470 nm	Polarizing plate  Adapter			500 g
LDR2-120GR2	Green	24 V / 26 W	525 nm				
		Extens	sion Cables ▶ P.296	Control Unit Selection	n Guide ▶ P.243	List of Control Unit Specification	ns ▶ P.245

\*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/pod

### LED properties Relative radiant intensity (%) 00 09 08 Spectral distribution refer to P.287.

■Red LED wide type (End of the model name: -WD)

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

■Blue LED ■Green LED

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.

Various technical

3D CAD

■White LED

Examples of Custom Ordered Products Data Sheets

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

documents available.

Directional

■Red LED narrow type

Product Fliers

# 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-32	LDR2-32		
DF-LDR-42	LDR2-42		
DF-LDR-50	LDR2-50		
DF-LDR-70*	LDR2-70		
DF-LDR-90	LDR2-90		
DF-LDR-120-45	LDR2-120		

<sup>\*</sup> DF-LDR-70 does not require an adapter. Directly affix it to the Light Unit.

P 290



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

#### Polarizing plate

Applicable Light Unit (Common for all colors)	
LDR2-32	
LDR2-42	
LDR2-50	
LDR2-70	
LDR2-90	
LDR2-120	

<sup>\*</sup> PL-LDR2-70 includes an adapter for

P.291



#### 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	
AD-LDR-120	LDR2-120	
D 005		

P.295



installation spots.

Can directly install the Light Unit to the screw section for the lens filter. Perfect for

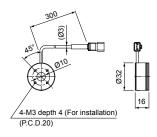
environments with narrow

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

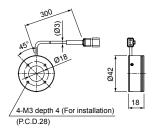
P.295

# Dimensions (mm)

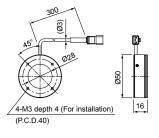
#### LDR2-32RD2/SW2/BL2/GR2



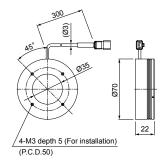
### LDR2-42RD2/SW2/BL2/GR2



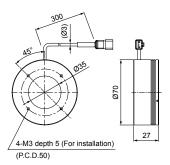
### LDR2-50RD2/RD2-WD/SW2/BL2/GR2



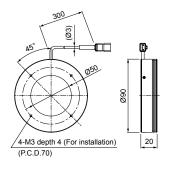
#### LDR2-70RD2/RD2-WD



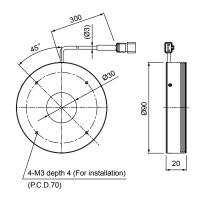
LDR2-70SW2/BL2/GR2



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

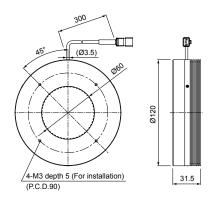


#### LDR2-90-30RD2/SW2/BL2/GR2



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

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



You can change the connectors of the Light Unit cable. Choose between M12 connectors and flying leads. Refer to P.5 for details.

Requests for Light Unit Selection

Requests for Loan

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

LDR2 LDR2-LA LDR-LA1 SQR SOR-TP

HPR2 LFR LKR FPR FPQ2 LDL2

Lighting HTDT5 HL TH2 (5 types) TH LFL HPD2

LDM2 LAV PDM LFX3 LFX3-PT

LFX2 LFV3 Collimated Lighting MEU MSU

Strobe Lighting Mater IQ/HSL-PCL

UV2 UV

LNSP-UV-FN IR2

Infrared Lighting IU

HLV2 LV LSP Etc. HFS/HFR HLV2-NR

> PFBR LNLP

HLV2-3M-RGB-3W

LNSP2 LNSP Coaxial Units LNSP-FN

LN/LN-HK LNSD LND2

HLND LT

LNV/HLDN LNDG

LNDG LNIS2 LNIS LNIS-F LNIS-FN

Telecentric Lens Macro Lens