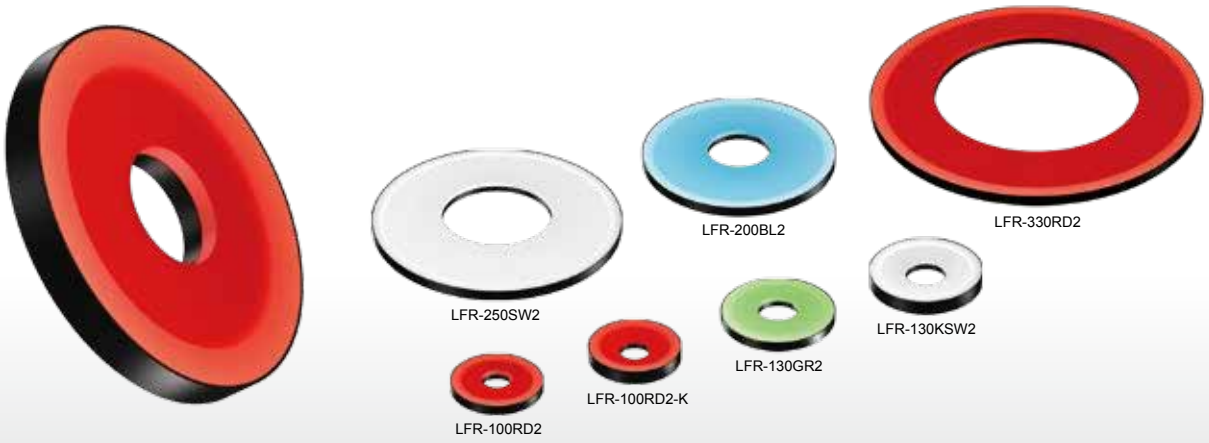
Ring Lights
LFR series

Diffused illumination from a flat emitting surface

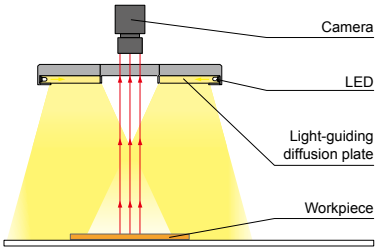


Applications Inspection for parts mounted on circuit boards, surface inspection for metal parts, inspection for faults on bottle tops, character recognition, text inspection, color determination inspection, etc.

Features

LEDs embedded around a circular light-guiding diffusion plate.
Uniformly diffused light is illuminated from a flat emitting surface.

Example configuration (LFR-100)

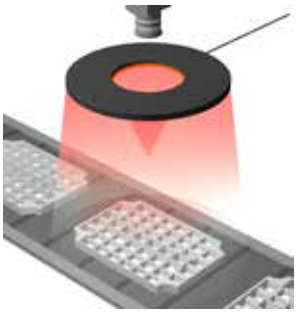


We accept custom orders.
Please feel free to inquire.

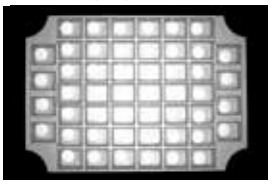
- Shape modifications
- Brightness increases
- Changes in wavelength, etc.

Imaging example: Imaging for detecting contents of a tray

Workpiece: Contents of a tray

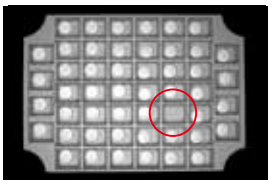


■LED Ring Light



Illuminated light converges in the center, making stable inspection difficult.

■LFR-250RD2



The whole thing is illuminated evenly, allowing for detection of present contents.

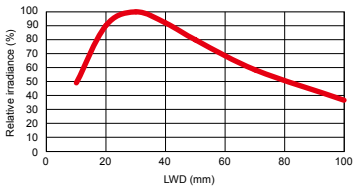
Data: Relative irradiance graph and uniformity (Representative example)

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

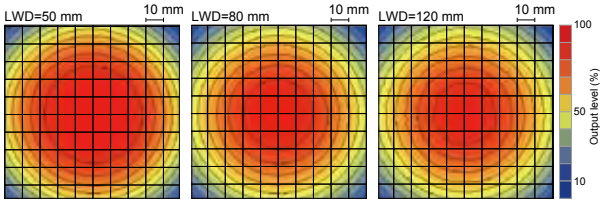
LFR-130RD2

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)



Lineup

End of the model name: -K: Type with angled emitting surface

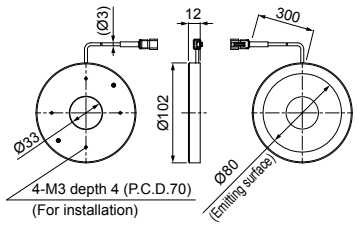
Model name	LED color	Power consumption	Peak wavelength/ correlated color temperature	Options	Extension cables	Recommended Control Units	Weight
LFR-100RD2	Red	24 V / 3.6 W	630 nm	–	FCB*3 Straight Cable FCB-W 2-branch Cable FCB-F 4-branch Cable FRCB Robot Cable *3 The cables with a model name that ends with "-ME7" or "-EL2" are not included.	PD3 CC-ST-1024 PSB POD*1	120 g
LFR-100SW2	White	24 V / 4.6 W	5,500 K				170 g
LFR-100BL2	Blue		470 nm				
LFR-100GR2	Green		525 nm				
LFR-100RD2-K	Red	24 V / 3.6 W	630 nm				140 g
LFR-100KSW2	White	24 V / 4.6 W	5,500 K				190 g
LFR-100BL2-K	Blue		470 nm				
LFR-100GR2-K	Green	24 V / 4.5 W	525 nm				
LFR-130RD2	Red	24 V / 4.6 W	630 nm				250 g
LFR-130SW2	White	24 V / 5.7 W	5,500 K				
LFR-130BL2	Blue		470 nm				
LFR-130GR2	Green		525 nm				
LFR-130RD2-K	Red	24 V / 4.6 W	630 nm				190 g
LFR-130KSW2	White	24 V / 5.7 W	5,500 K				200 g
LFR-130BL2-K	Blue		470 nm				190 g
LFR-130GR2-K	Green		525 nm				
LFR-200RD2	Red	24 V / 8.1 W	630 nm			PD3 CC-ST-1024*2 PSB POD*1 *2 Can only use red.	490 g
LFR-200SW2	White	24 V / 11 W	5,500 K				
LFR-200BL2	Blue		470 nm				
LFR-250RD2	Red	24 V / 11 W	630 nm			PD3 PSB POD*1	1,080 g
LFR-250SW2	White	24 V / 13 W	5,500 K				1,090 g
LFR-250BL2	Blue		470 nm				1,080 g
LFR-330RD2	Red	24 V / 14 W	630 nm			PD3 PSB POD*1	1,500 g

LED Properties: Spectral Distribution ▶ P.290 | 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/pod

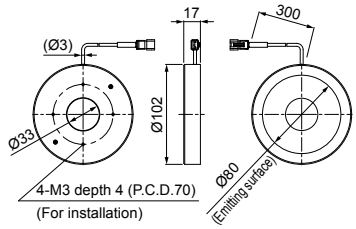
Dimensions (mm)

LFR-100RD2/SW2/BL2/GR2



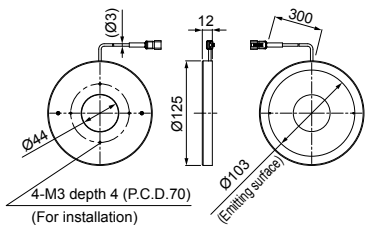
The emitting surface for the LFR-100SW2/BL2/GR2 is Ø77.

LFR-100RD2-K/KSW2/BL2-K/GR2-K

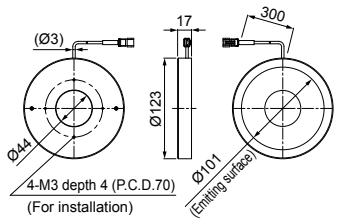


The emitting surface for the LFR-100KSW2/BL2/GR2 is Ø78.

LFR-130RD2/SW2/BL2/GR2

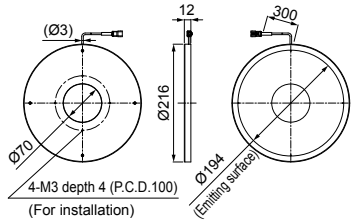


LFR-130RD2-K/KSW2/BL2-K/GR2-K



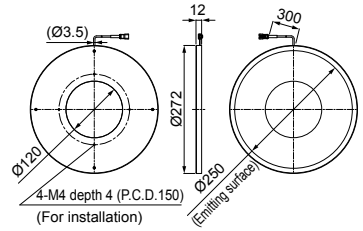
The emitting surface for the LFR-130KSW2 is Ø99.

LFR-200RD2/SW2/BL2



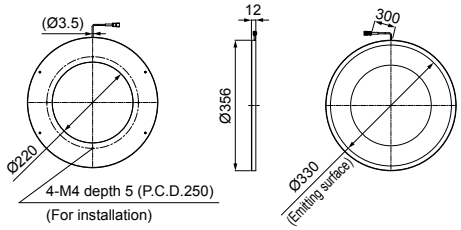
The emitting surface for the LFR-200SW2/BL2 is Ø193.

LFR-250RD2/SW2/BL2



The emitting surface for the LFR-250SW2/BL2 is Ø246.

LFR-330RD2



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