

Diffused illumination from a flat emitting surface

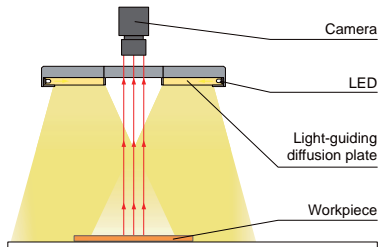


**Applications** Inspection for parts mounted on circuit boards, surface inspection for metal parts, inspection for faults on bottle tops, character recognition, text inspection, printing inspection, color determination inspection, etc.

**Features**

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

**Example configuration (LFR-100)**



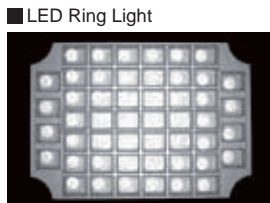
We accept custom orders. Please feel free to inquire.

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

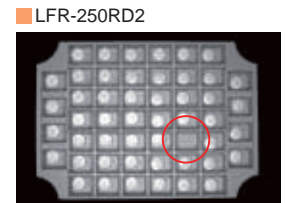
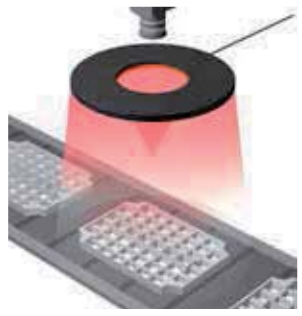
**Imaging example: Imaging for detecting content in trays**



Workpiece: Content in trays



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



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

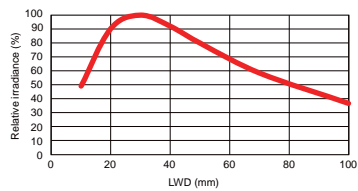
**Data: Relative Irradiance Graph and Uniformity (Representative Example)**

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

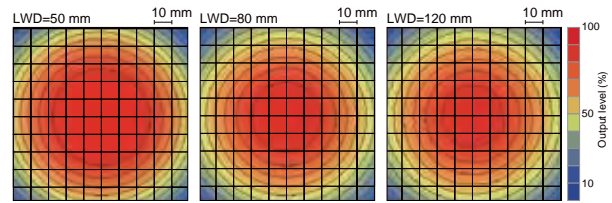
**LFR-130RD2**

Relative irradiance graph<sup>\*1</sup> (LWD characteristics)<sup>\*2</sup>

\*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 <sup>+3</sup> Straight Cable  FCB-W <sup>+4</sup> 2-branch Cable  FCB-F 4-branch Cable  FRCB Robot Cable	PD3    CC-ST-1024  PSB    POD* <sup>1</sup>	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	140 g				
LFR-100RD2-K	Red	24 V / 3.6 W					630 nm
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				250 g
LFR-130RD2	Red	24 V / 4.6 W	630 nm				
LFR-130SW2	White	24 V / 5.7 W	5,500 K				190 g
LFR-130BL2	Blue		470 nm				
LFR-130GR2	Green	525 nm	200 g				
LFR-130RD2-K	Red	24 V / 4.6 W					630 nm
LFR-130KSW2	White	24 V / 5.7 W	5,500 K				190 g
LFR-130BL2-K	Blue		470 nm				
LFR-130GR2-K	Green	525 nm	490 g				
LFR-200RD2	Red	24 V / 8.1 W					630 nm
LFR-200SW2	White	24 V / 11 W	5,500 K				1,080 g
LFR-200BL2	Blue		470 nm				
LFR-250RD2	Red	24 V / 11 W	630 nm				1,090 g
LFR-250SW2	White	24 V / 13 W	5,500 K				
LFR-250BL2	Blue		470 nm	1,080 g			
LFR-330RD2	Red	24 V / 14 W	630 nm	1,500 g			

LED Properties: Spectral Distribution ▶ P.326

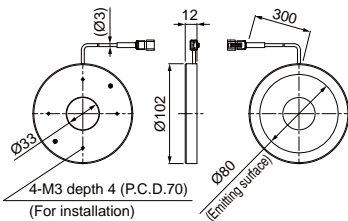
Extension Cables ▶ P.308

Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

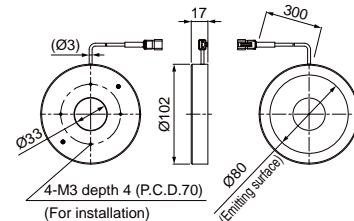
**Dimensions (mm)**

LFR-100RD2/SW2/BL2/GR2



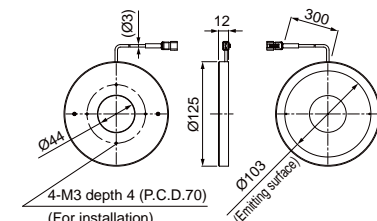
The emitting surface for the LFR-100SW2/BL2/GR2 is Ø77.

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

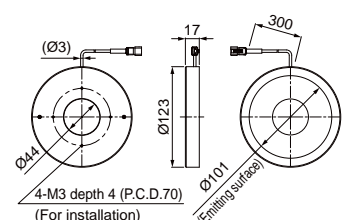


The emitting surface for the LFR-100KSW2/BL2/GR2 is Ø78.

LFR-130RD2/SW2/BL2/GR2

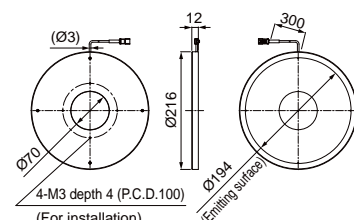


LFR-130RD2-K/KSW2/BL2-K/GR2-K



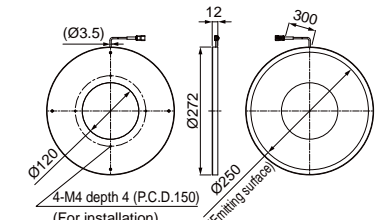
The emitting surface for the LFR-130KSW2 is Ø99.

LFR-200RD2/SW2/BL2



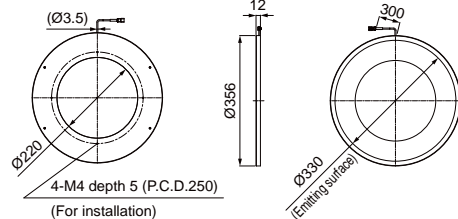
The emitting surface for the LFR-200SW2/BL2 is Ø193.

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.

You can inquire using our website.

- Sample Testing
- Light Unit Selection
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- Product Details
- Pricing/Quotation
- Discontinued Products

- Direct Lighting
  - LDR2
  - LDR2-LA
  - LDR-LA1
  - SQR
  - SQR-TP
  - HPR2
- Diffused Lighting
  - LFR
  - LKR
  - FPR
  - FPQ2
- Direct Lighting
  - LDL2
  - LDLB
  - HLDL2
  - HL
- Diffused Lighting
  - TH2 (5 types)
  - TH
  - LFL
  - HPD2
  - LDM2
  - LAV
  - PDM
  - LFX3
  - LFX3-PT
  - LFV3
- Colimated Lighting
  - MSU
  - MFU
- Strobe Lighting
  - PF
- Water-proof Lighting
  - HLDR-IP/
  - HSL-PCL
- Ultraviolet Lighting
  - UV2
  - UV
  - LNSP-UV-FN
- Infrared Lighting
  - IR2
- Intensify Control Lighting
  - IU
- Spot Lighting, Etc.
  - HLV3
  - HLV2
  - LV
  - LSP
  - HFS/HFR
  - HLV3-NR
  - HLV3-3M-RGB-4
  - HLV2-NR
  - HLV2-3M-RGB-3W
  - PFBR
  - PFB3
  - PFB2
- Convergent Lighting
  - LNLP
  - LNSP2
  - LNSP
  - Coaxial Units
  - LNSP-FN
  - LN/LN-HK
- Diffused Lighting
  - LNSD
  - LND2
  - HLND
  - LT
  - LNv
- Oblique-Angled Lighting
  - LNDG
  - LNIS2
  - LNIS
  - LNIS-FN
- Lenses
  - Telecentric Lens
  - Macro Lens