

Provides diffused light at a low angle from an angled emitting surface

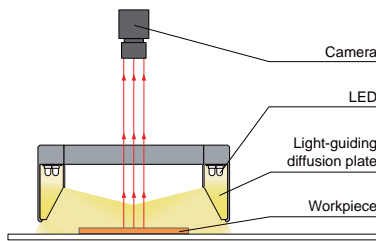


Applications Edge extraction of metal parts, character recognition for electronic parts, inspection for parts on circuit boards, label inspections, imaging of alignment marks, etc.

Features

Light from the vertically-arranged LEDs is transmitted through the light-guiding diffusion plate and uniform diffused light is illuminated centrally on the workpiece from a low angle.

Example configuration (FPR-100)



We accept custom orders. Please feel free to inquire.

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

Imaging example: Imaging the appearance of metal parts



Workpiece: Nut for bearings



It is difficult to evenly illuminate the slanted exterior.



It is possible to evenly illuminate the slanted exterior.

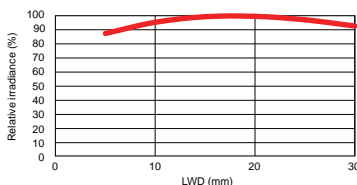
Data: Relative Irradiance Graph and Uniformity (Representative Example)

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

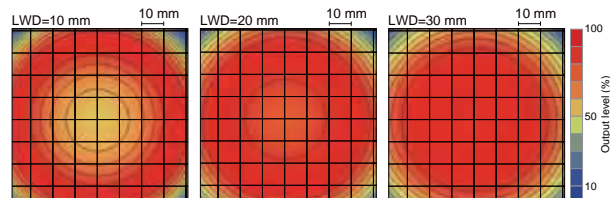
FPR-100RD2

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)



Lineup

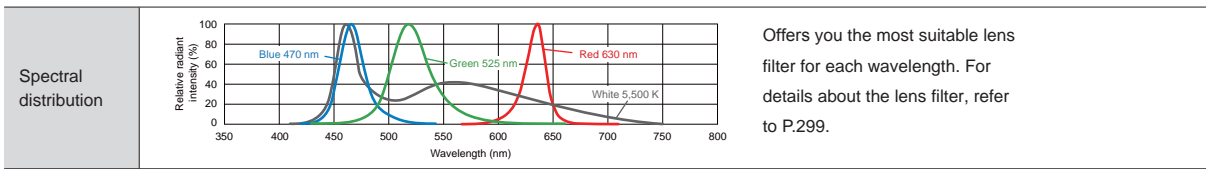
Model name	LED color	Power consumption	Peak wavelength / correlated color temperature	Options	Extension cables	Recommended Control Units	Weight				
FPR-100RD2	Red	24 V / 6.1 W	630 nm	-	FCB ⁺³ Straight Cable	<table border="1"> <tr><td>PD3</td><td>CC-ST-1024</td></tr> <tr><td>PSB</td><td>POD^{*1}</td></tr> </table>	PD3	CC-ST-1024	PSB	POD ^{*1}	220 g
PD3	CC-ST-1024										
PSB	POD ^{*1}										
FPR-100SW2	White	5,500 K									
FPR-100BL2	Blue	470 nm									
FPR-100GR2	Green	24 V / 7.6 W	525 nm		FCB-W ⁺⁴ 2-branch Cable	<table border="1"> <tr><td>PD3</td><td>CC-ST-1024²</td></tr> <tr><td>PSB</td><td>POD^{*1}</td></tr> </table>	PD3	CC-ST-1024 ²	PSB	POD ^{*1}	300 g
PD3	CC-ST-1024 ²										
PSB	POD ^{*1}										
FPR-136RD2	Red	630 nm									
FPR-136SW2	White	5,500 K									
FPR-136BL2	Blue	24 V / 12 W	470 nm	FCB-F 4-branch Cable	<table border="1"> <tr><td>PD3</td><td>CC-ST-1024²</td></tr> <tr><td>PSB</td><td>POD^{*1}</td></tr> </table>	PD3	CC-ST-1024 ²	PSB	POD ^{*1}	280 g	
PD3	CC-ST-1024 ²										
PSB	POD ^{*1}										
FPR-136GR2	Green	525 nm									
FPR-180RD2	Red	630 nm									
FPR-180SW2	White	24 V / 13 W	5,500 K	FRCB Robot Cable	<table border="1"> <tr><td>PD3</td><td>CC-ST-1024²</td></tr> <tr><td>PSB</td><td>POD^{*1}</td></tr> </table>	PD3	CC-ST-1024 ²	PSB	POD ^{*1}	300 g	
PD3	CC-ST-1024 ²										
PSB	POD ^{*1}										
FPR-180BL2	Blue	470 nm									
FPR-180GR2	Green	525 nm									
FPR-180RD2	Red	24 V / 13 W	630 nm	<p>^{*3} The cables with a model name that ends with "-ME7", "-EL2", "-PF", or "-PF-EL9" are not included.</p> <p>^{*4} The cables with a model name that ends with "-EL2" are not included.</p>	<table border="1"> <tr><td>PD3</td><td>CC-ST-1024²</td></tr> <tr><td>PSB</td><td>POD^{*1}</td></tr> </table>	PD3	CC-ST-1024 ²	PSB	POD ^{*1}	400 g	
PD3	CC-ST-1024 ²										
PSB	POD ^{*1}										
FPR-180SW2	White	5,500 K									
FPR-180BL2	Blue	470 nm									
FPR-180GR2	Green	24 V / 16 W	525 nm		<table border="1"> <tr><td>PD3</td><td>CC-ST-1024²</td></tr> <tr><td>PSB</td><td>POD^{*1}</td></tr> </table>	PD3	CC-ST-1024 ²	PSB	POD ^{*1}	380 g	
PD3	CC-ST-1024 ²										
PSB	POD ^{*1}										
FPR-180RD2	Red	630 nm									
FPR-180SW2	White	5,500 K									
FPR-180BL2	Blue	24 V / 16 W	470 nm	<table border="1"> <tr><td>PD3</td><td>CC-ST-1024²</td></tr> <tr><td>PSB</td><td>POD^{*1}</td></tr> </table>	PD3	CC-ST-1024 ²	PSB	POD ^{*1}	400 g		
PD3	CC-ST-1024 ²										
PSB	POD ^{*1}										
FPR-180GR2	Green	525 nm									

Extension Cables ▶ P.308

Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

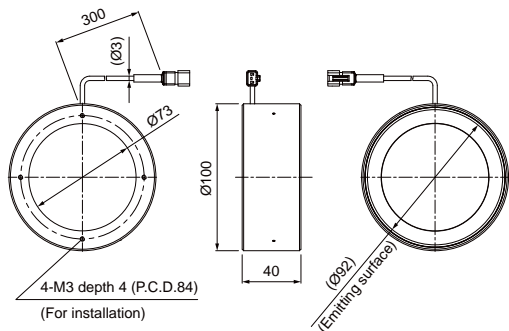
LED Properties



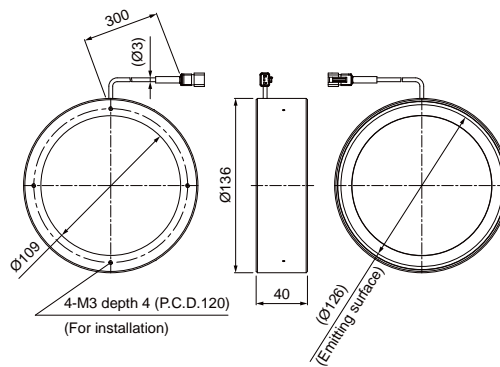
Be sure to read the "Instruction Guide" included with the product before use and follow the safety precautions upon use. The data included is for reference only. Actual values may vary.

Dimensions (mm)

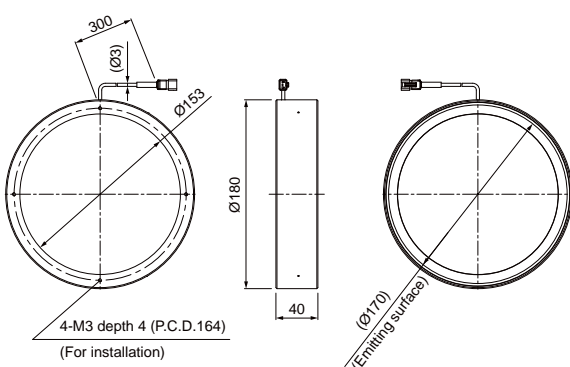
FPR-100RD2/SW2/BL2/GR2



FPR-136RD2/SW2/BL2/GR2



FPR-180RD2/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.

- Direct Lighting
 - LDR2
 - LDR2-LA
 - LDR-LA1
 - SQR
 - SQR-TP
- Diffused Lighting
 - HPR2
 - LFR
 - LKR
 - FPR
 - FFQ2
- Direct Lighting
 - LDL2
 - LDLB
 - HLDL2
 - HL
- Diffused Lighting
 - TH2 (5 types)
 - TH
 - LFL
 - HPD2
 - LDM2
 - LAV
 - PDM
 - LFX3
 - LFX3-PT
 - LFV3
- Coaxial Lighting
 - MSU
 - MFU
- Strobe Lighting
 - PF
- Water-proof Lighting
 - HLDR-IP/
 - HSL-PCL
- Ultraviolet Lighting
 - UV2
 - UV
 - LNSP-UV-FN
- Infrared Lighting
 - IR2
- Intensity Control
 - 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
 - LVN
- Oblique/Angled Lighting
 - LNDG
 - LNIS2
 - LNIS
 - LNIS-FN
- Lenses
 - Telecentric Lens
 - Macro Lens