



Ultra-high power strobe light units

■ Ring Type
LDR-PF Series



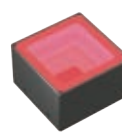
■ Low-Angle Ring Type
LDR-PF-LA Series



■ Diffused Ring Type
HPR-PF Series



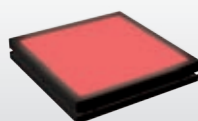
■ Low-Angle Square Type
FPQ-PF Series



■ Bar Type
LDL-PF Series



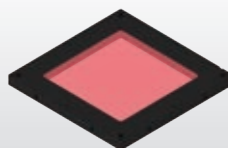
■ Flat Type
TH-PF Series



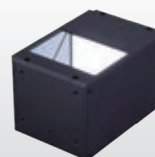
■ Dome Type
HPD-PF Series



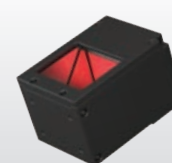
■ Flat Dome Type
LFXV-PF Series



■ Coaxial Type
LFV-PF Series



■ Coaxial Type (High-Resolution)
LFV-G-PF Series



Applications

Inspections for damage or stains, visual and color determination inspections, printed character inspection, appearance inspection for food or medicines, etc.

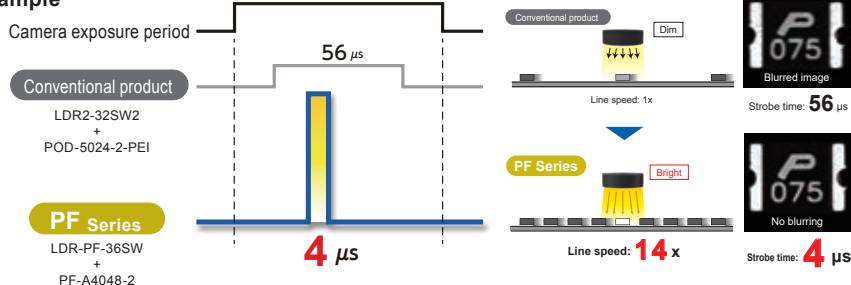
“Extreme Power” Strobe Lights

The High Power Strobe Lights PF Series enables extreme power strobe lighting. The PF Series light units are dedicatedly designed for strobe lighting to achieve further large output power than that of the conventional products when used with the dedicated control units.

This makes them applicable to fast inspection lines and a wide range of applications improving productivity.

Comparison of images with the conventional product

Example



Conventional product

Long strobe time due to lack of brightness leads to image blurring.

PF Series

High power emission enables instantaneous imaging.

Wide Variety of Available Light Units

Flat type, flat dome type, low-angle square type, and coaxial (high-resolution) type have been added. A total of 10 series with 76 models are available to meet your inspection needs.



We accept custom orders. Please feel free to inquire.

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

Brightness Comparable to Xenon Flash Lamps

Achieved the same inspection speed made possible by xenon lamps.



15 W xenon flash lamp
Strobe time: 1.75 μs
(measured value)



High power strobe light unit
Strobe time: 15 μs

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

➤ Shorten Emission Time for Faster Inspection Lines

Inspection lines can be faster as clear images can be captured even with a short light emission time.

Imaging Example

■ Workpiece



Can

■ LFXV-100SW + POD Control Unit



Light emission time: 300 μ s

■ LFXV-PF-100SW + PF Control Unit



Light emission time: 30 μ s

* Imaging at LWD
10 mm

Shorten emission time to approx. 1/10 of conventional products on overdrive.

➤ No Blur at High Speed

● Horizontal Blur

Conventional product

Long exposure period and insufficient brightness result in image blur.



The image is blurred in fast moving production lines.

PF Series

High brightness allows for short exposure time and reduces blur.

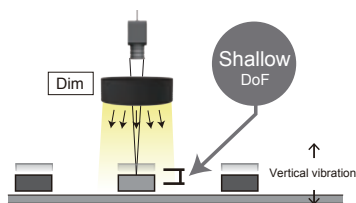


Applicable to fast moving production lines.

● Vertical Blur

Conventional product

Adjusting aperture to compensate for dim lighting reduces depth of field.



Vibration causes image blur.

PF Series

High brightness allows for smaller aperture and increased depth of field.

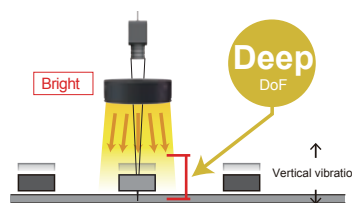


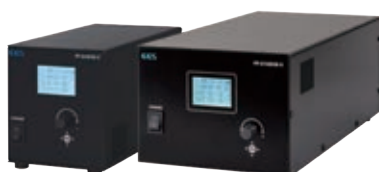
Image unaffected by vibration.

➤ Freely Adjustable Flash Timing

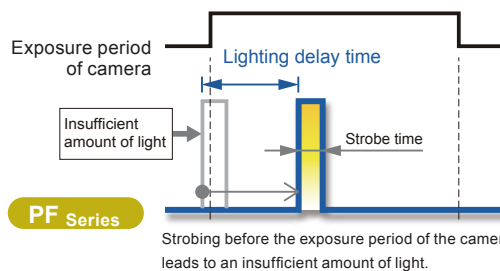
You can use the lighting delay time setting of the control unit to adjust the timing of the flash to be within the exposure period of the camera.

■ Dedicated Control Units PF-A4048-2 and PF-A16048-4

Maximize performance of the high power strobe light units.



For more information on the dedicated control units ▶ P.345



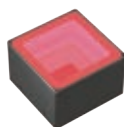
PF Series

Strobing before the exposure period of the camera leads to an insufficient amount of light.

Delaying the timing of the flash enables strobing within the exposure period of the camera.

LDR2	LDR2-LA	LDR-LA1	SQR	SQR-TP	Ring (Direct)
HLDR3	HPR2	LFR	LKR	FPR	Ring (Convergent / Diffused)
FPQ3	LDL2	LDLB	HLDL3	LB	Square Bar
TH2 (5 types)	LFL	HPD2	LDM2	LAV	Flat Dome
PF	MSU	MFU	LFV3	LFV3-G	Coaxial Coaxial
HLDR-IP	HSL-PCL	UV3/VL3	UV	LNSP-UV3-FN	Water-proof UV / Violet
IR2 (Under 1000-nm Type)	IR (Over 1000-nm Type)	CIR	LDF-RLS	IU	Infrared Reference Control Light Source
HLV3	LV	HFS/HFR	HLV3-22-4-NR	HLV3-3M-RGB-4	Spot, Etc.
PFBR-600SW2	PFBR-150	SLG-150V-CCS	PFBR3(A)	LNLP	Line (Convergent)
LNLP	LNSP2	Coaxial Units	LNSP-FN	LN/LN-HK	Line (Diffused)
LNLD	LNLD2	LT	LNLD	LNLD (Rectangular Type)	Line (Oblique Angled)
LNLDG	LNIS2	LNIS	LNIS-FN	Telecentric Lens	Macro Lens
LDF-NB	Other Products				

PF Series



Refer to our website for product details.

CCS High Power Strobe Lights

Search

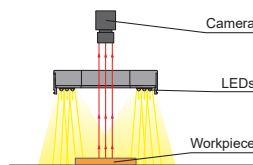


Features of Each Series

Ring Type LDR-PF Series

Strong direct light from the LEDs mounted on the flat board illuminates the workpiece from above.

Example configuration (LDR-PF-75)



Imaging example: Imaging the external appearance of chip components

Workpiece



Chip component

LDR-PF-36SW

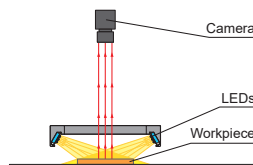
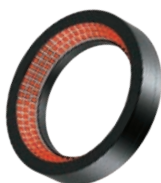


The appearance of the chip component is captured.

Low-Angle Ring Type LDR-PF-LA Series

Provides extremely strong direct light from a low angle to the center.

Example configuration (LDR-PF-75-LA)



Imaging example: Imaging the appearance of medicine tablets with imprinted text

Workpiece



Medicine tablets

LDR-PF-100SW-LA

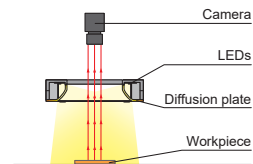


Strobe light allows you to capture the imprinted text and the appearance of the workpiece.

Diffused Ring Type HPR-PF Series

The diffusion plate transmits light from LEDs and provides strong and uniform diffused light.

Example configuration (HPR-PF-100)



Imaging example: Imaging the appearance of beverage containers

Workpiece



Beverage container

HPR-PF-100SW

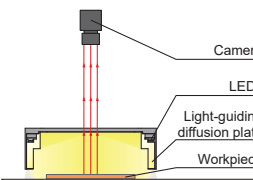


Condition of container bottom and text are clearly imaged.

Low-Angle Square Type FPQ-PF Series

Low-angle diffuse illumination from 4 directions

Example configuration (FPQ-PF-48)



Imaging example: Exterior imaging of electronic components

Workpiece



Electronic components

FPQ-PF-48SW

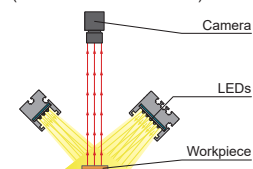


Clearly image print and cracked areas on electronic components.

Bar Type LDL-PF Series

The diffusion plate transmits light from LEDs and provides uniform diffused light on the whole workpiece from its wide emitting surface.

Example configuration (LDL-PF-102X18/102X30)



Imaging example: Imaging the paper label of beverage bottles

Workpiece



Beverage bottle

LDL-PF-102X18SW

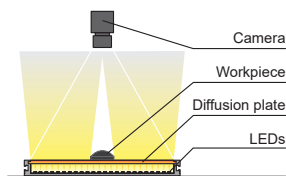
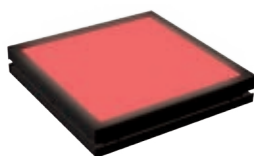


Captured image of a paper label and barcode.

Flat Type TH-PF Series

Uniform diffuse light for backlight illumination

Example configuration (TH-PF-100X100)



Imaging example: liquid level testing for disinfectant solution

Workpiece



Disinfectant solution

TH-PF-100X100SW/RD

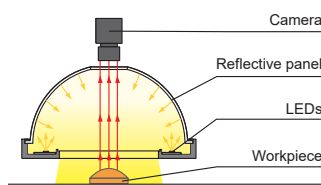


Accurately detect liquid level and label position.

Dome Type HPD-PF Series

Light from the LEDs is diffused inside the dome-shaped reflective panel. The whole surface of the workpiece is illuminated with diffused light uniformly.

Example configuration (HPD-PF-150)



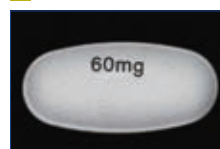
Imaging example: Imaging the surface of medicine tablets

Workpiece



Medicine tablet

HPD-PF-75SW

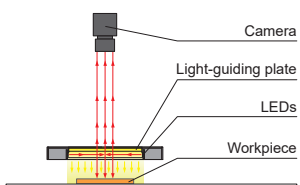
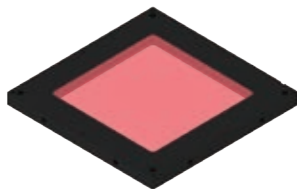


Condition of tablet surface and text are clearly imaged.

Flat Dome Type LFXV-PF Series

Dome light effect in a flat design

Example configuration (LFXV-PF-100)



Imaging example: Print inspection on food cans

Workpiece



Food cans

LFXV-PF-100SW

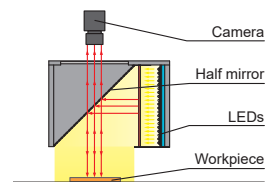


Print is clear and readable.

Coaxial Type LFFV-PF Series

Diffused light from the LEDs is reflected on the half mirror and directed vertically downward on the same axis as the camera axis.

Example configuration (LFFV-PF-100)



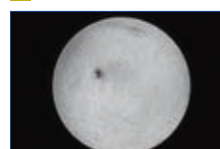
Imaging example: Imaging the appearance of cans

Workpiece



Can

LFFV-PF-100SW

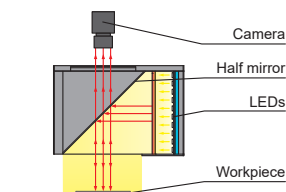


Condition and the appearance of can are clearly imaged.

Coaxial Type (High-Resolution) LFFV-G-PF Series

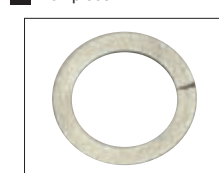
Thin half-mirror prevents ghost images

Example configuration (LFFV-G-PF-35)



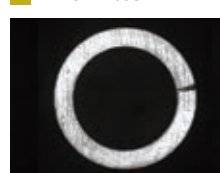
Imaging example: Exterior inspection of drain gasket

Workpiece



Drain gasket

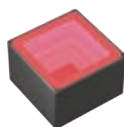
LFFV-G-PF-35SW



Clearly image gasket chipping.

LDR2	LDR2-LA	LDR-LA1	SQR	SQR-TP	Ring (Direct)
HLDR3	HPR2	LFR	LKR	FPR	Ring (Convergent / Diffused)
FPQ3					Square
LDL2	LDLB	HLDL3	LB		Bar
TH2 (5 types)	LFL				Flat
HPD2	LAV	PDM	LFXV	LFX3	Dome
LFX3-PT					
LFX3	LFX3-G				Coaxial
MSU	MFU				Coaxial
PF					Strobe
HLDR-IP	HSL-PCL	UV3/VL3	UV	LNSP-UV3-FN	Water-proof / UV / Violet
IR2 (Under 1000-nm Type)	IR (Over 1000-nm Type)	CIR			Infrared
LDF-RLS					Reference Light Source
IU					Intensity Control
HLV3	LV	HFS/HFR	HLV3-22-4-NR	HLV3-3M-RGB-4	Spot, Etc.
PFBR-600SW2	PFBR-150	SLG-150V-CCS	PFBR3(A)		
LNL	LNSP2	Coaxial Units	LNSP-FN	LN/LN-HK	Line (Convergent)
LNSD	LND2	LT	LNV	LFXV (Rectangular Type)	Line (Diffused)
TH2 (Rectangular Type)					
LNDG	LNIS2	LNIS	LNIS-FN		Line (Oblique Angled)
Telecentric Lens					Macro Lens
Other Products					
LDF-NB					

PF Series



Refer to our website for product details.

CCS High Power Strobe Lights

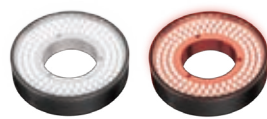
Search



Data: Illuminance Graph and Uniformity (Representative Example)

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

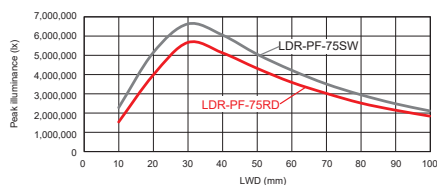
Ring Type LDR-PF Series



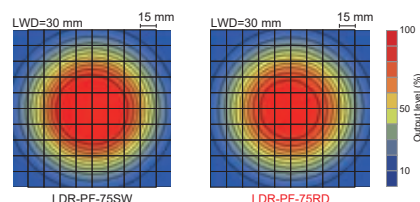
LDR-PF-75SW/RD

Illuminance graph^{*1}(LWD characteristics)^{*2}

^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)



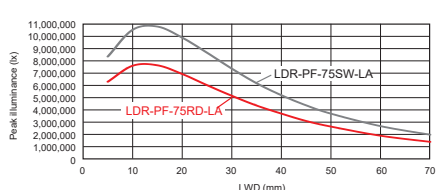
Low-Angle Ring Type LDR-PF-LA Series



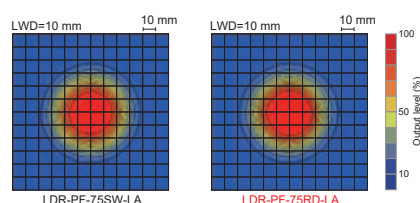
LDR-PF-75SW/RD-LA

Illuminance graph^{*1}(LWD characteristics)^{*2}

^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)



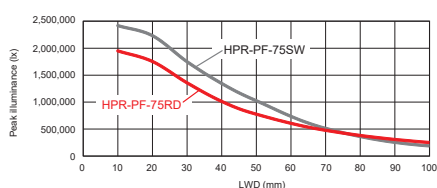
Diffused Ring Type HPR-PF Series



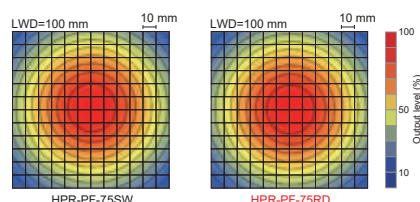
HPR-PF-75SW/RD

Illuminance graph^{*1}(LWD characteristics)^{*2}

^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece

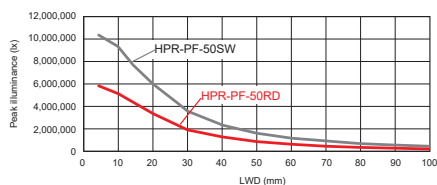


Uniformity (Relative irradiance)

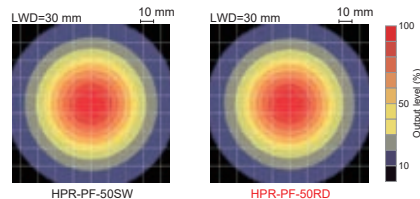


Illuminance graph^{*1}(LWD characteristics)^{*2}

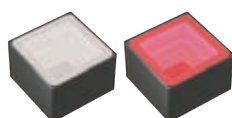
^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)



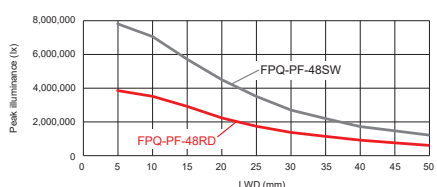
Low-Angle Square Type FPQ-PF Series



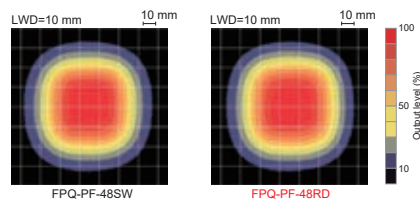
FPQ-PF-48SW/RD

Illuminance graph^{*1}(LWD characteristics)^{*2}

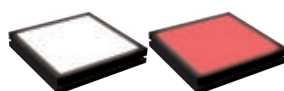
^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)

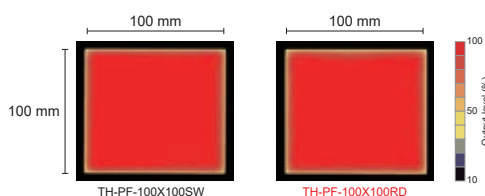


Flat Type TH-PF Series

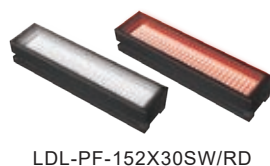


TH-PF-100X100SW/RD

Uniformity (Relative radiance)

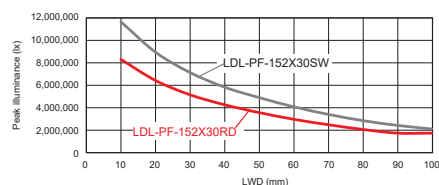


Bar Type LDL-PF Series

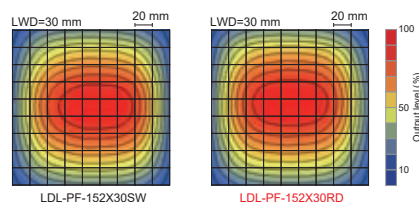


Illuminance graph^{*1}(LWD characteristics)^{*2}

^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece

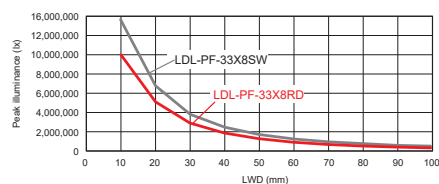


Uniformity (Relative irradiance)

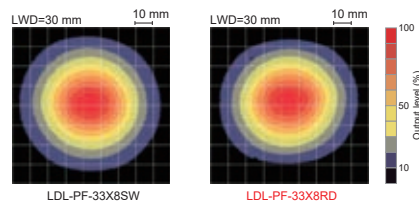


Illuminance graph^{*1}(LWD characteristics)^{*2}

^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)

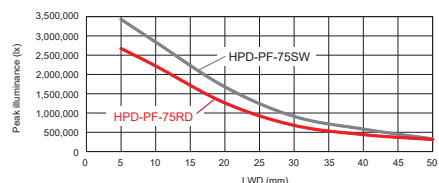


Dome Type HPD-PF Series

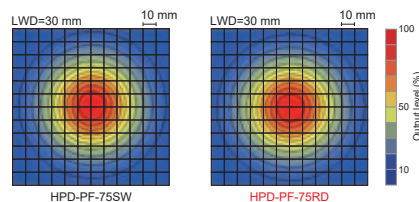


Illuminance graph^{*1}(LWD characteristics)^{*2}

^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)

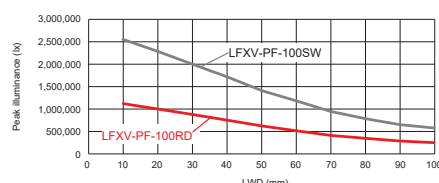


Flat Dome Type LFXV-PF Series

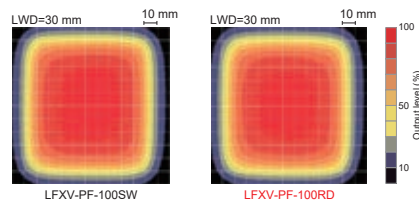


Illuminance graph^{*1}(LWD characteristics)^{*2}

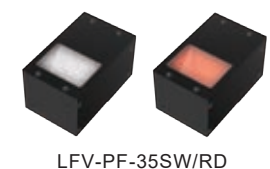
^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative irradiance)

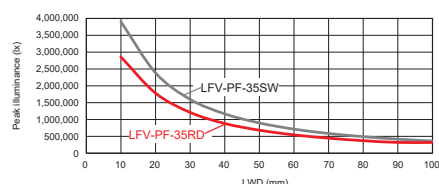


Coaxial Type LFV-PF Series

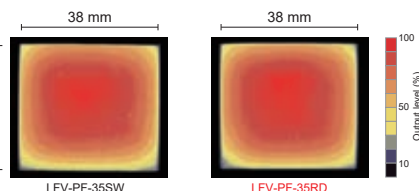


Illuminance graph^{*1}(LWD characteristics)^{*2}

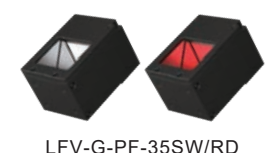
^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative radiance)

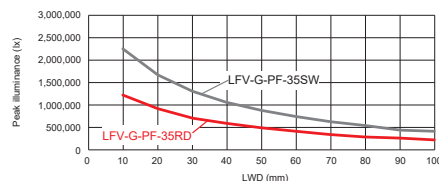


Coaxial Type (High-Resolution) LFV-G-PF Series

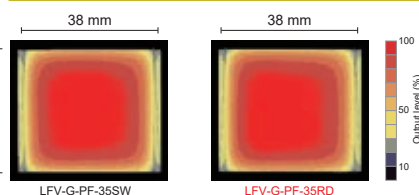


Illuminance graph^{*1}(LWD characteristics)^{*2}

^{*1} Illuminance on the optical axis ^{*2} Illuminating distance from the light unit to the workpiece



Uniformity (Relative radiance)



LDR2	LDR2-LA	LDR-LA1	SQR	SQR-TP	Ring (Direct)
HLDR3	HPR2	LFR	LKR	FPR	Ring (Convergent / Diffused)
FPQ3	LDL2	LDLB	HLDL3	LB	Square
TH2 (5 types)	LFL				Bar
HPD2	LDM2	LAV	PDM	LFXV	Flat
LFX3-PT	LFX3				Dome
LFV3	LFV3-G				Coaxial
MSU	MFU				Coaxial
HLDR-IP	HSL-PCL	UV3/VL3	UV	LNSP-UV3-FN	Strobe
IR2 (Under 1000-nm Type)	IR (Over 1000-nm Type)	CIR			Water-proof
LDF-RLS					UV / Violet
IU					Infrared
HLV3	LV	HFS/HFR	HLV3-22-4-NR	HLV3-3M-RGB-4	Reference Light Source
PFBR-600SW2	PFBR-150	SLG-150V-CCS	PFBR3(A)		Intensity Control
LNL	LNSP2	Coaxial Units	LNSP-FN	LNLN-HK	Spot, Etc.
LNSD	LND2	LT	LNV	LFXV (Rectangular Type)	Line (Convergent)
TH2 (Rectangular Type)					Line (Diffused)
LNDG	LNIS2	LNIS	LNIS-FN		Line (Oblique Angled)
Telecentric Lens	Macro Lens				Other Products
LDF-NB					

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Sample Testing

Light Unit Selection

Free Product Trial

Custom Orders

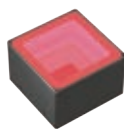
Product Details

Pricing/Quotation

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PF Series



Refer to our website for product details.

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Lineup

Type		Model Name ^{*1}	Peak Current		Options	Extension Cables	Dedicated ^{*4} Control Units	Weight
			RD (Red)	SW (White)				
Ring		LDR-PF-36□□	5.4 A		Diffusion plate	FCB-PF Straight Cable (Dedicated Cable)		70 g
		LDR-PF-54□□	10.8 A		Polarizing plate			110 g
		LDR-PF-75□□	18 A	21.6 A	Adapter			150 g
Low-Angle Ring		LDR-PF-75□□-LA	14.4 A		Diffusion plate Adapter	FCB-PF Straight Cable (Dedicated Cable)		125 g
		LDR-PF-100□□-LA	28.8 A			FCB-PF-EL9 Straight Cable (Dedicated Cable)		200 g
		LDR-PF-150□□-LA	42 A					350 g
Diffused Ring		HPR-PF-50□□	6 A		Brackets	FCB-PF Straight Cable (Dedicated Cable)		50 g
		HPR-PF-75□□	12 A					170 g
		HPR-PF-100□□	21.6 A			FCB-PF-EL9 Straight Cable (Dedicated Cable)		180 g
		HPR-PF-150□□	36 A					270 g
		HPR-PF-200□□	43.2 A				400 g	
Low-Angle Square		FPQ-PF-32□□ (Custom)	*2		Reflective plate	FCB-PF Straight Cable (Dedicated Cable)	*2	
		FPQ-PF-48□□	14 A		-		90 g	
Bar	Emitting width 4 mm	LDL-PF-19X4□□ (Custom)	*2		Diffusion plate Polarizing plate Brackets	FCB-PF Straight Cable (Dedicated Cable)	PF-A4048-2 PF-A16048-4	*2
	Emitting width 8 mm	LDL-PF-33X8□□	4 A					22 g
	Emitting width 18 mm	LDL-PF-52X18□□	5.4 A					140 g
		LDL-PF-102X18□□	10.8 A					210 g
		LDL-PF-152X18□□	16.2 A					290 g
	Emitting width 30 mm	LDL-PF-52X30□□	9 A					180 g
		LDL-PF-102X30□□	18 A			270 g		
	LDL-PF-152X30□□	27 A		FCB-PF × 2 ^{*3}	380 g			
Flat		TH-PF-27X27□□ (Custom)	*2		Light control film Brackets	*2	*2	
		TH-PF-51X51□□ (Custom)	*2			*2		
		TH-PF-100X100□□	41 A			FCB-PF-EL9 Straight Cable (Dedicated Cable)	200 g	
Dome		HPD-PF-75□□	12 A		Brackets	FCB-PF Straight Cable (Dedicated Cable)	150 g	
		HPD-PF-100□□	21.6 A			170 g		
		HPD-PF-150□□	36 A			FCB-PF-EL9 Straight Cable (Dedicated Cable)	310 g	
		HPD-PF-200□□	43.2 A			480 g		
Flat Dome		LFXV-PF-25□□ (Custom)	*2		Protective plate	*2	*2	
		LFXV-PF-50□□ (Custom)	*2				*2	
		LFXV-PF-75□□ (Custom)	*2				*2	
		LFXV-PF-100□□	26 A	36 A		FCB-PF-EL9 Straight Cable (Dedicated Cable)	440 g	
Coaxial		LFV-PF-35□□	10.8 A	14.4 A	Diffusion plate	FCB-PF Straight Cable (Dedicated Cable)	PF-A16048-4	230 g
		LFV-PF-50□□	18.0 A	21.6 A	Polarizing plate			400 g
		LFV-PF-70□□	37.8 A		Light control film			800 g
		LFV-PF-100□□	48.6 A	64.8 A	Brackets	FCB-PF-EL9 Straight Cable (Dedicated Cable)		1400 g
					Diffusion plate Polarizing plate Light control film			
Coaxial (High-Resolution)		LFV-G-PF-27□□ (Custom)	*2		Protective plate	FCB-PF	PF-A4048-2	*2
		LFV-G-PF-35□□	8 A				PF-A16048-4	150 g

*1 □□ in the model name contains the LED color. (RD: Red, SW: White)

*2 Contact our local sales office for details.

*3 Light unit has two connectors. Use two extension cables of the same length to connect the light unit. Using cables of different lengths may cause uneven light emission due to voltage drop caused by the DC resistance of the cable.

*4 The output characteristics and light intensity setting values for starting light emission vary with the combinations of light units and power supplies. Set the intensity range in accordance with the application.

Extension Cables ► P.148

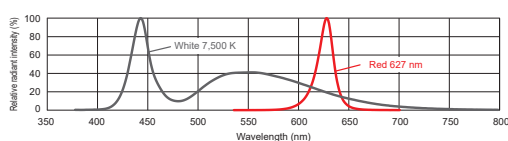
Dedicated power supply ► P.345

We accept custom orders. • Shape modifications
Please feel free to inquire. • Brightness increases
• Changes in wavelength, etc.

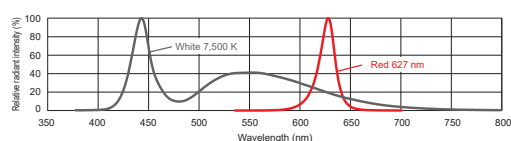
LED Properties

Spectral
distribution

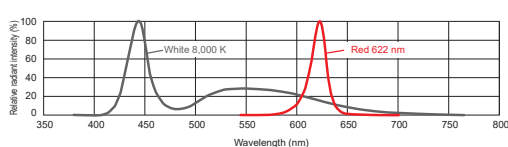
■ LDR-PF Series



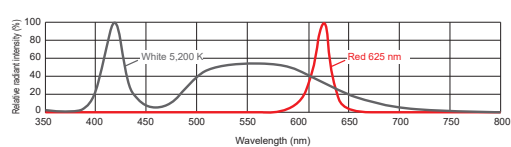
■ LDL-PF Series



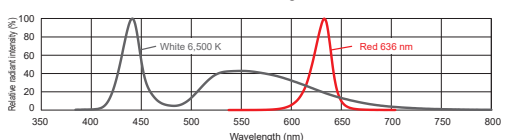
■ LDR-PF-LA Series



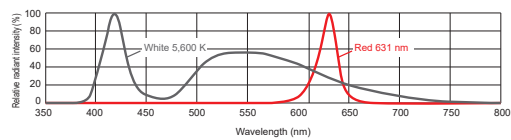
■ TH-PF Series



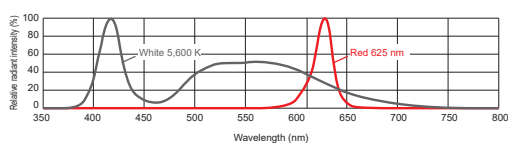
■ HPR-PF/ HPD-PF Series *Excluding HPR-PF-50



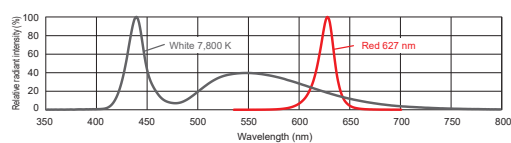
■ LFXV-PF Series



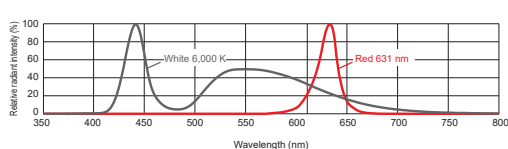
■ HPR-PF-50SW/RD



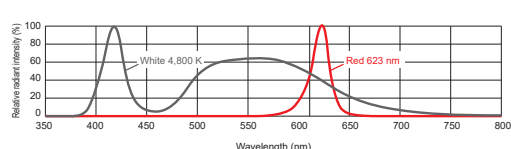
■ LFV-PF Series



■ FPQ-PF Series



■ LFV-G-PF Series



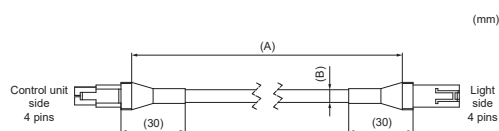
Lens filters suitable for each wavelength are available. For details about the lens filter, refer to P.371

Be sure to read the User Manual included with the product before use and follow the safety precautions upon use.

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

Extension Cables

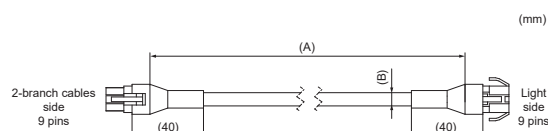
■ FCB-PF



Model Name	Dimension A	Dimension B	Permitted bending radius *	Weight
FCB-1-PF	1 m	Ø5.9	35.4 mm	100 g
FCB-2-PF	2 m			150 g
FCB-3-PF	3 m			200 g
FCB-5-PF	5 m	Ø7.0	42.0 mm	450 g

*The allowable cable bend radius is for reference only. It is not a guaranteed value. Refer to the user manual for extension cable connection method.

■ FCB-PF-EL9



Model Name	Dimension A	Dimension B	Permitted bending radius *	Weight
FCB-1-PF-EL9	1 m	Ø7.4	44.4 mm	100 g
FCB-2-PF-EL9	2 m			190 g
FCB-3-PF-EL9	3 m			270 g
FCB-5-PF-EL9	5 m	Ø9.1	54.6 mm	680 g

*The allowable cable bend radius is for reference only. It is not a guaranteed value. Refer to the user manual for extension cable connection method.

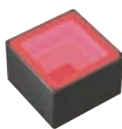
LDR2	Ring (Direct)
LDR2-LA	Ring (Direct)
LDR-LA1	Ring (Direct)
SQR	Ring (Direct)
SQR-TP	Ring (Direct)
HLDR3	Ring (Convergent / Diffused)
HPR2	Ring (Convergent / Diffused)
LFR	Ring (Convergent / Diffused)
LKR	Ring (Convergent / Diffused)
FPR	Ring (Convergent / Diffused)
FPQ3	Square
LDL2	Bar
LDLB	Bar
HLDL3	Bar
LB	Bar
TH2 (5 types)	Flat
LFL	Flat
HPD2	Dome
LDM2	Dome
LAV	Dome
PDM	Dome
LFXV	Dome
LFX3	Dome
LFX3-PT	Dome
LFV3	Coaxial
LFV3-G	Coaxial
MSU	Coaxial
MFU	Coaxial
PF	Strobe
HLDR-IP	Water-proof
HSL-PCL	Water-proof
UV3/VL3	UV / Violet
UV	UV / Violet
LNSP-UV3-FN	UV / Violet
IR2 (Under 1000-nm Type)	Infrared
IR (Over 1000-nm Type)	Infrared
CIR	Infrared
LDF-RLS	Reference Light Source
IU	Intensity Control
HLV3	Spot, Etc.
LV	Spot, Etc.
HFS/HFR	Spot, Etc.
HLV3-22-4-NR	Spot, Etc.
HLV3-3M-RGB-4	Spot, Etc.
PFBR-600SW2	Spot, Etc.
PFBR-150	Spot, Etc.
SLG-150V-CCS	Spot, Etc.
PFB3(A)	Spot, Etc.
LNLP	Line (Convergent)
LNSP2	Line (Convergent)
Coaxial Units	Line (Convergent)
LNFP-FN	Line (Convergent)
LN/LN-HK	Line (Convergent)
LNLD	Line (Diffused)
LNLD2	Line (Diffused)
LT	Line (Diffused)
LNVP	Line (Diffused)
LFXV (Rectangular Type)	Line (Diffused)
TH2 (Rectangular Type)	Line (Diffused)
LNLDG	Line (Oblique Angled)
LNIS2	Line (Oblique Angled)
LNIS	Line (Oblique Angled)
LNIS-FN	Line (Oblique Angled)
Telecentric Lens	Lenses
Macro Lens	Lenses
LDF-NB	Other Products

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PF Series



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Options

Diffusion Plates

Ring type units

Bar type units

Coaxial type units



Transmission: High Transmission: Low

Reduces glare, especially problematic in the imaging of glossy workpieces.

Model Name ¹	Applicable Light Unit
DF-LDR-PF-OO	LDR-PF Series ²
DF-LDR-PF-OO-LA	LDR-PF-LA Series ²
DF-LDL-PF-OO	LDL-PF Series
DF-LDL2-33X8	LDL-PF-33X8
DF-LFV3-OO (Transmission: High) ³	LFV-PF Series
DF-LFV3-OO-UF (Transmission: Low)	

¹ OO in the model name contains the light size.

² An adapter is needed for attachment to the light unit.

³ It is the same diffusion plate as the standard equipment.

► P.375

Adapters

Ring type units



For attaching a diffusion plate or polarizing plate to the light unit.

Model Name ¹	Applicable Light Unit
AD-LDR-PF-OO	LDR-PF Series
AD-LDR-PF-OO-LA	LDR-PF-LA Series

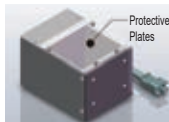
¹ OO in the model name contains the light size.

► P.380

Protective Plates

Coaxial type units

Flat Dome type units



Protects the emitting part of the light unit.

Model Name ¹	Applicable Light Unit
PR-LFV3-OO	LFV-G-PF Series
PR-LFXV-OO	LFXV-PF Series

¹ OO in the model name contains the light size.

PR-LFV3 Series ► P.133

PR-LFXV Series ► P.115

Brackets

Bar type units

Flat type units



Secures light units.

Model Name	Applicable Light Unit
BK-LDL-PF	LDL-PF Series
BK-TH-LE12	TH-PF Series

► P.381

Polarizing Plates

Ring type units

Bar type units

Coaxial type units



Reduces glare when used in combination with a polarizing filter on the camera.

Model Name ¹	Applicable Light Unit
PL-LDR-PF-OO	LDR-PF Series ²
PL-LDL-PF-OO-HO/VE ³	LDL-PF Series
PL-LDL2-33X8-HO/VE	LDL-PF-33X8
PL-LFV3-OO	LFV-PF Series

¹ OO in the model name contains the light size.

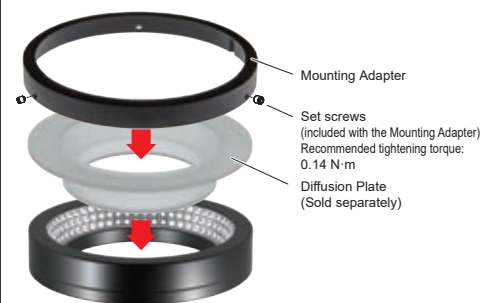
² An adapter is needed for attachment to the light unit.

³ HO: Light is polarized parallel to the longer edge of the plate.

VE: Light is polarized parallel to the shorter edge of the plate.

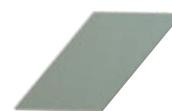
► P.377

How to Install the Diffusion Plate



Light Control Films

Flat type units/Coaxial type units



Improves parallelism of light to reduce light diffraction.

Model Name ¹	Applicable Light Unit
LC-LFV3-OO	LFV-PF Series
LC-TH2-OO-HO/VE ²	TH-PF Series

¹ OO in the model name contains the light size.

² Model suffix -HO/VE has a different louver direction.

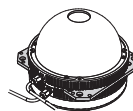
HO: When installed with the cable outlet directly below, the louver direction is horizontal.

VE: When installed with the cable outlet directly below, the louver direction is vertical.

► P.379

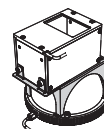
Light Joint Brackets

Model Name	Applicable Light Unit 1 (Common for all colors)	Applicable Light Unit 2 (Common for all colors)
BK-75-JO	HPD-PF-75	HPR-PF-75
BK-100-JO	HPD-PF-100	HPR-PF-100
BK-150-JO	HPD-PF-150	HPR-PF-150
BK-200-JO	HPD-PF-200	HPR-PF-200



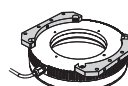
Coaxial Light Joint Brackets

Model Name	Applicable Light Unit 1 (Common for all colors)	Applicable Light Unit 2 (Common for all colors)
BK-HPD2-75-LFV	HPD-PF-75	LFV-PF-35
BK-HPD2-100-LFV	HPD-PF-100	LFV-PF-50
BK-HPD2-150-LFV	HPD-PF-150	
BK-HPD2-200-LFV	HPD-PF-200	LFV-PF-70



Expansion Mounting Brackets

Model Name	Applicable Light Unit (Common for all colors)
BK-75-CI	HPD-PF-75 / HPR-PF-75
BK-100-CI	HPD-PF-100 / HPR-PF-100
BK-150-CI	HPD-PF-150 / HPR-PF-150
BK-200-CI	HPD-PF-200 / HPR-PF-200



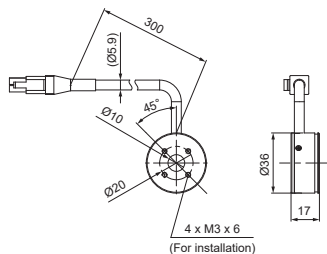
► P.382

Dimensions (mm)

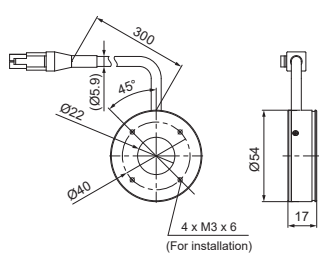
Ring Type LDR-PF Series



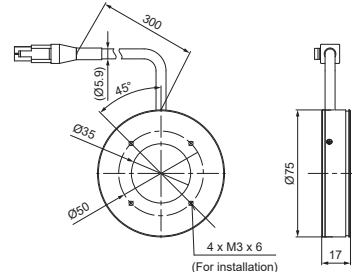
LDR-PF-36SW/RD



LDR-PF-54SW/RD



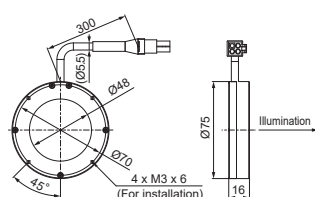
LDR-PF-75SW/RD



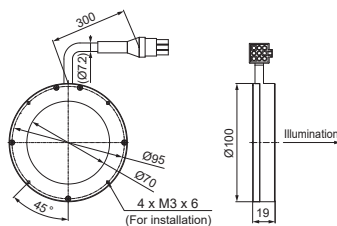
Low-Angle Ring Type LDR-PF-LA Series



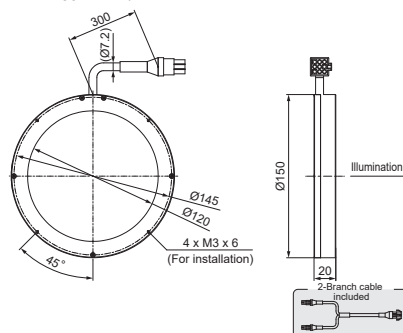
LDR-PF-75RD-LA / SW-LA



LDR-PF-100RD-LA / SW-LA



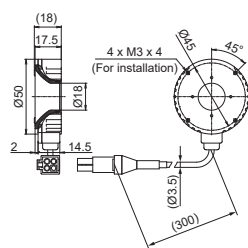
LDR-PF-150RD-LA / SW-LA



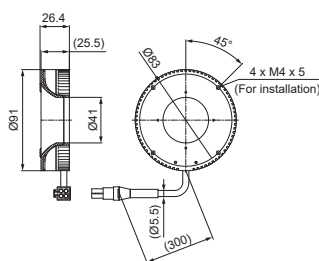
Diffused Ring Type HPR-PF Series



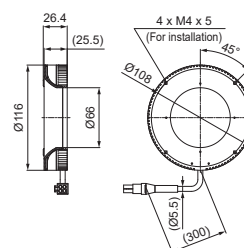
HPR-PF-50SW/RD



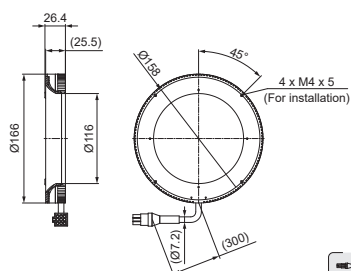
HPR-PF-75SW/RD



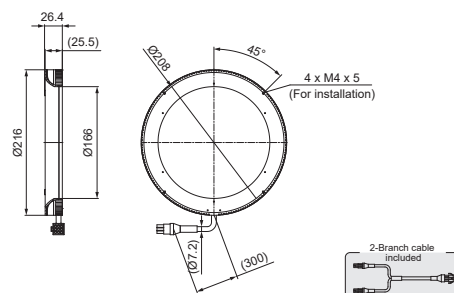
HPR-PF-100SW/RD



HPR-PF-150SW/RD



HPR-PF-200SW/RD



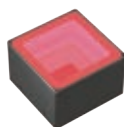
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LDR2 LDR2-LA LDR-LA1 SQR SQR-TP	Ring (Direct)
HLDR3 HPR2 LFR LKR FPR	Ring (Convergent / Diffused)
FPQ3	Square
LDL2 LDLB HDL3 LB	Bar
TH2 (5 types) LFL	Flat
HPD2 LDM2 LAV PDM LFXV LFX3 LFX3-PT	Dome
LFV3 LFV3-G	Coaxial
MSU MFU	Coaxial
PF	Strobe
HLDR-IP HSL-PCL UV3/VL3 UV LNSP-UV3-FN	Water- proof UV / Violet
IR2 (Under 1000-nm Type) IR (Over 1000-nm Type) CIR	Infrared
LDF-RLS	Reference Light Source
IU	Intensity Control
HLV3 LV HFS/HFR HLV3-22-4-NR HLV3-3M-RGB-4 PFBR-600SW2 PFBR-150 SLG-150V-CCS PFB3(A)	Spot, Etc.
LNL LNSP2 Coaxial Units LNSP-FN LNLN-HK	Line (Convergent)
LNSD LND2 LT LNV LFXV (Rectangular Type) TH2 (Rectangular Type)	Line (Diffused)
LNDG LNI2 LNI3 LNI3-FN	Line (Oblique Angled)
Telecentric Lens Macro Lens	Lenses
LDF-NB	Other Products

PF Series



Refer to our website for product details.

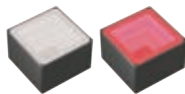
CCS High Power Strobe Lights

Search

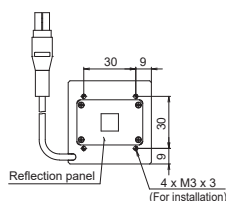
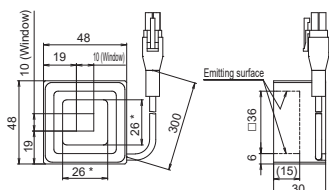
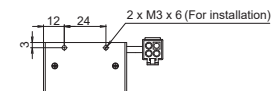


Dimensions (mm)

Low-Angle Square Type FPQ-PF Series

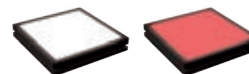


FPQ-PF-48SW/RD

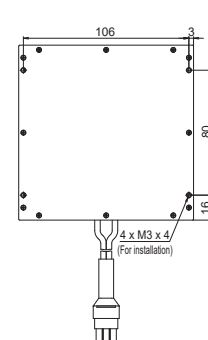
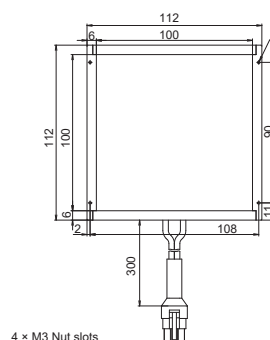


* Window size when the reflection panel is removed.
The reflection panel is detachable from the light unit.

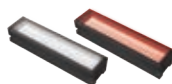
Flat Type TH-PF Series



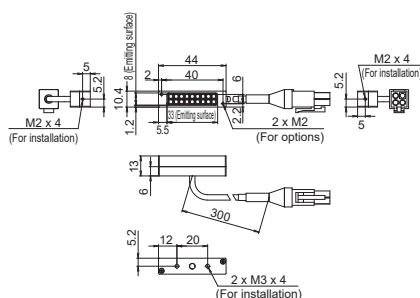
TH-PF-100X100SW/RD



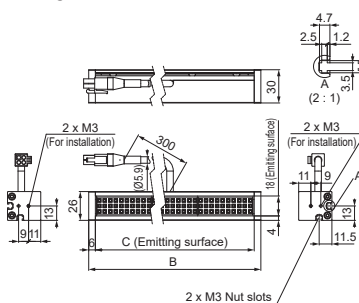
Bar Type LDL-PF Series



Emitting width 8 mm

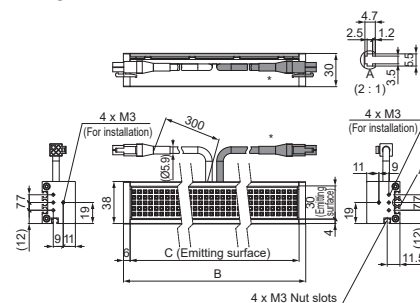


Emitting width 18 mm



Model Name	B	C
LDL-PF-52X18SW / RD	64	52
LDL-PF-102X18SW / RD	114	102
LDL-PF-152X18SW / RD	164	152

Emitting width 30 mm



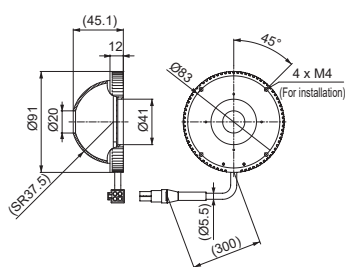
* The LDL-PF-152X30SW/RD light unit has two connectors.

Model Name	B	C
LDL-PF-52X30SW / RD	64	52
LDL-PF-102X30SW / RD	114	102
LDL-PF-152X30SW / RD	164	152

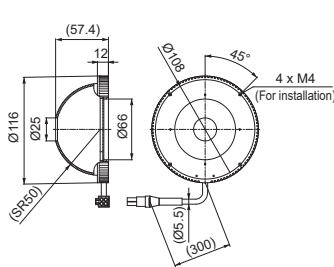
Dome Type HPD-PF Series



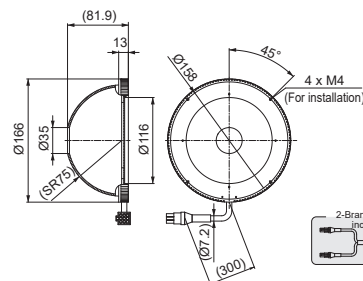
HPD-PF-75SW/RD



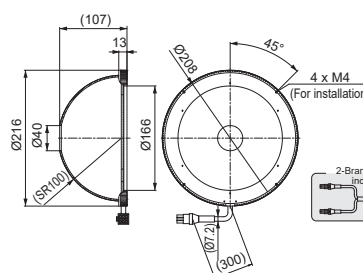
HPD-PF-100SW/RD



HPD-PF-150SW/RD



HPD-PF-200SW/RD



Various technical documents available.

PDF Drawings

DXF Drawings

Product Brochures

Instruction Guides

3D CAD

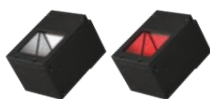
Data Sheets

Imaging Examples

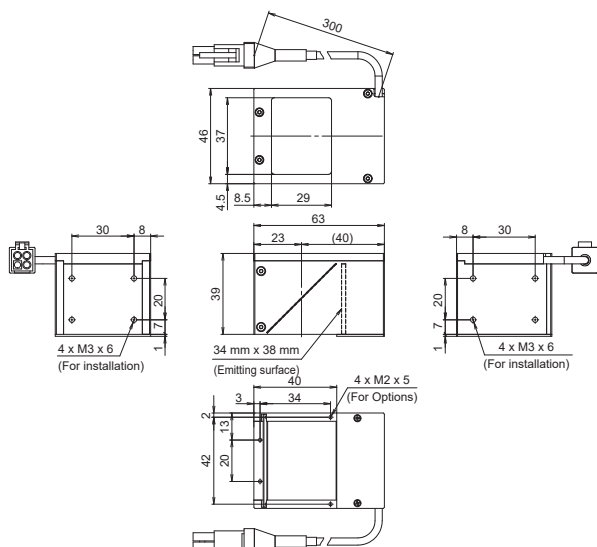
Digital Catalogs

Register to use them.

Coaxial Type (High-Resolution) LFV-G-PF Series



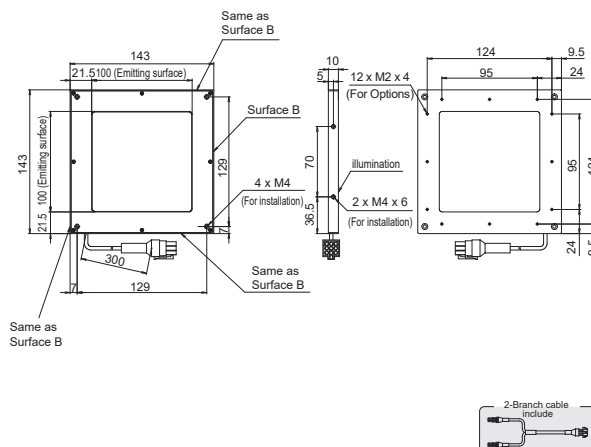
LFV-G-PF-35SW/RD



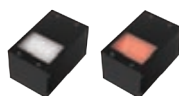
Flat Dome Type LFXV-PF Series



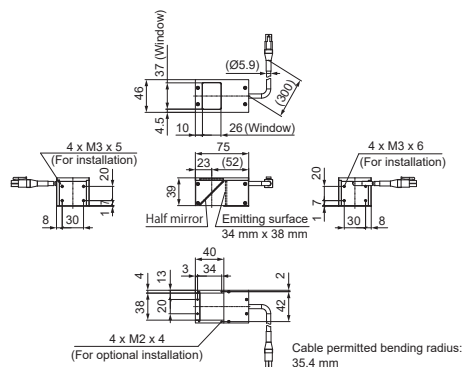
LFXV-PF-100SW/RD



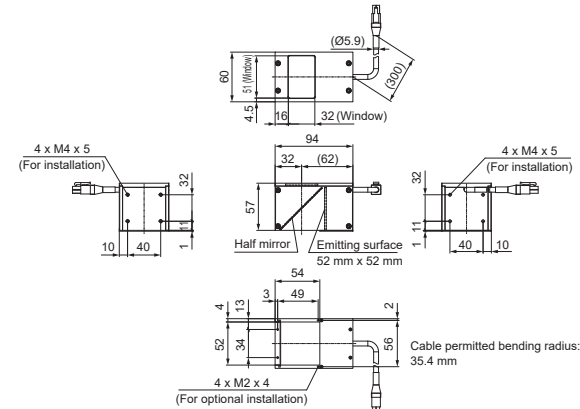
Coaxial Type LFV-PF Series



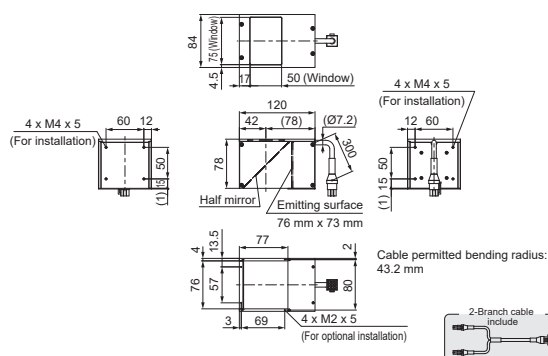
LFV-PF-35SW/RD



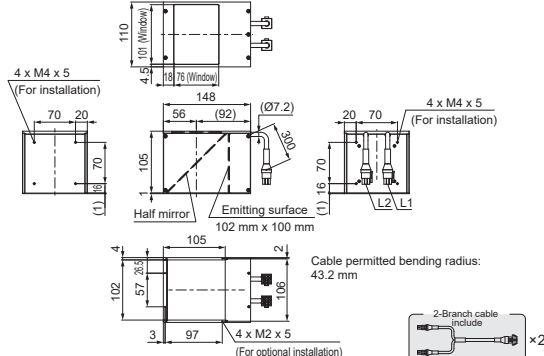
LFV-PF-50SW/RD



LFV-PF-70SW/RD



LFV-PF-100SW/RD



You can inquire
using our website.

Sample Testing	Light Unit Selection	Free Product Trial	Custom Orders	Product Details	Pricing/Quotation	Discontinued Products
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Inquire on our website here.
<https://www.ccs-grp.com/contact/>

LDR2	LDR2-LA	LDR-LA1	SQR	SQR-TP	Ring (Direct)
HLDR3	HPR2	LFR	LKR	FPR	Ring (Convergent / Diffused)
FPQ3	LDL2	LDLB	HLDL3	LB	Square
TH2 (5 types)	LFL	HPD2	LDM2	LAV	Bar
LFV3	LFV3-G	MSU	MFU	PF	Flat
HLDR-IP	HSL-PCL	UV3/VL3	UV	LNSP-UV3-FN	Dome
IR2	(Under 1000-nm Type)	IR	(Over 1000-nm Type)	CIR	Coaxial
LDF-RLS	Intensity Control	IU	Intensity Control	HLV3	Coaxial
HLS/HFR	HLV3-22-4-NR	HLV3-3M-RGB-4	PFBR-600SW2	PFBR-150	Water-proof
SLG-150V-CCS	PFBR3(A)	LNLP	LNLP2	Coaxial Units	UV / Violet
LNLP	LNLP2	LNLP-FN	LN/LN-HK	LN/LN-HK	Infrared
LNLD2	LT	LNLD	LNLD	LNLD	Reference Light Source
LNLD	LNLD	LNLD	LNLD	LNLD	Spot, Etc.
LNLD	LNLD	LNLD	LNLD	LNLD	Line (Convergent)
LNLD	LNLD	LNLD	LNLD	LNLD	Line (Diffused)
LNLD	LNLD	LNLD	LNLD	LNLD	Line (Oblique Angled)
LNLD	LNLD	LNLD	LNLD	LNLD	Telecentric Lens
LNLD	LNLD	LNLD	LNLD	LNLD	Macro Lens
LNLD	LNLD	LNLD	LNLD	LNLD	Other Products