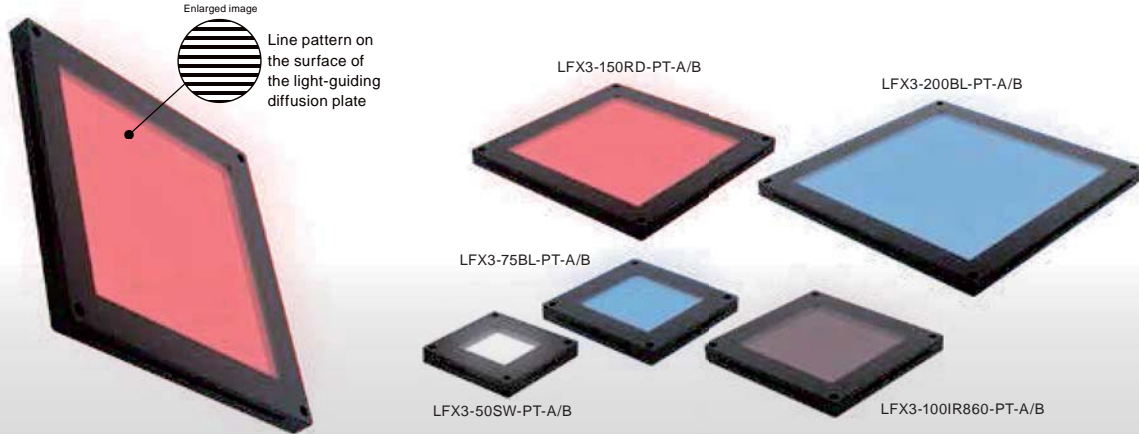


# A cutting-edge method for inspecting bumps on a reflective surface

## Special Order Products



**Applications** Inspection for bumps on a reflective surface such as mirrors, metal sheets, films, glass parts, liquid crystal parts, etc.

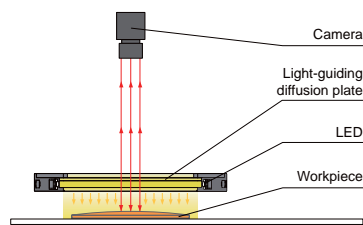
## Features

We altered the dot printings on the light-guiding diffusion plate surface to a line pattern. This makes it possible to detect gentle bumps on reflective surfaces which are hard to find with Coaxial Lights.

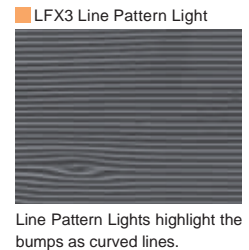
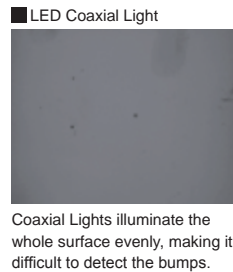
We accept custom orders. Please feel free to inquire.

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

### Example configuration (LFX3-100-PT)



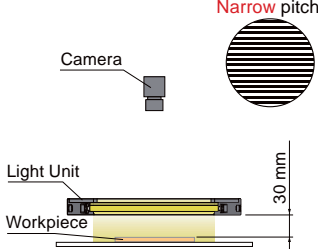
### Imaging example: Imaging the appearance of metal plates



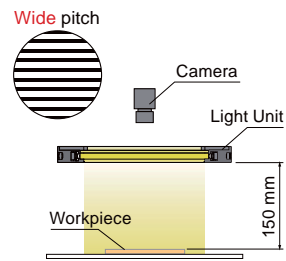
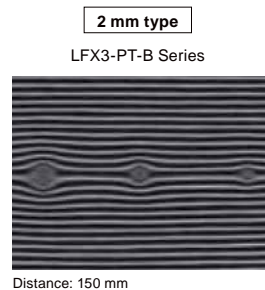
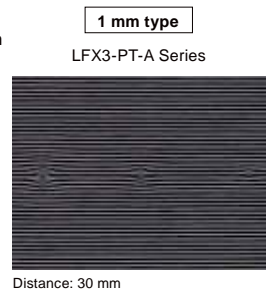
## Two Types of Line Patterns Available

Select one to match your inspection conditions.

### Imaging examples



The distance from the Light Unit to the workpiece is **short**.



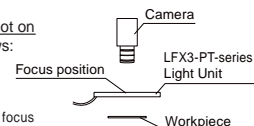
The distance from the Light Unit to the workpiece is **long**.

### To capture a perfect image

Install the LFX3-PT-series Light Unit so that it projects the line pattern onto the inspection object surface. Generally, focus the camera not on the inspection object but on the line pattern of the Light Unit. If the captured image has interference fringes, adjust the settings as follows:

- Open the camera aperture.
- Increase the distance between the Light Unit and the inspection object.

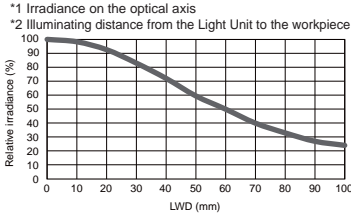
Note: The most appropriate position of the Light Unit and the best imaging conditions, such as the distance between the camera and inspection object, focus position, F-number, and so on, may vary with the type of the inspection. Use the above description only as a guide for adjustment.



➤ **Data: Relative Irradiance Graph** (Representative Example)

**LFX3-100SW-PT-A**

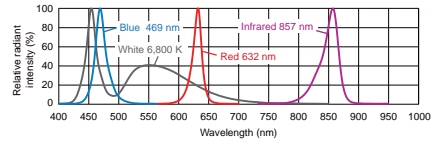
Relative irradiance graph (LWD Characteristics)<sup>\*1</sup>



The graph included is for reference only. Results for individual products may vary.

➤ **LED Properties**

Spectral distribution



Offers you the most suitable lens filter for each wavelength. For details about the lens filter, refer to P.299.

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.

➤ **Lineup**

Model name	Type	LED color	Power consumption	Peak wavelength / correlated color temperature	Extension cables	Recommended Control Units	Weight
LFX3-50RD-PT-A/B	1 mm pitch type (the end of the model name: -A) / 2 mm pitch type (the end of the model name: -B)	Red	24 V / 13 W	632 nm	FCB <sup>6</sup> Straight Cable FCB-W <sup>7</sup> 2-branch Cable FCB-F 4-branch Cable FRCB Robot Cable *6 The cables with a model name that ends with "-ME7", "-EL2", "-PF", or "-PF-EL9" are not included. *7 The cables with a model name that ends with "-EL2" are not included.	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <sup>*2</sup> <input type="checkbox"/> PSB <input type="checkbox"/> POD <sup>*1</sup>	230 g
LFX3-50SW-PT-A/B		White	24 V / 12 W	6,800 K		<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <sup>*3</sup> <input type="checkbox"/> PSB <input type="checkbox"/> POD <sup>*1</sup>	320 g
LFX3-50BL-PT-A/B		Blue	24 V / 6.1 W	469 nm		<input type="checkbox"/> PD3 <input type="checkbox"/> PSB <input type="checkbox"/> POD <sup>*1</sup>	400 g
LFX3-50IR860-PT-A/B		Infrared	24 V / 6.6 W	857 nm		<input type="checkbox"/> PD3 <input type="checkbox"/> PSB <sup>*4</sup> <input type="checkbox"/> POD <sup>*1</sup>	620 g
LFX3-75RD-PT-A/B		Red	24 V / 13 W	632 nm		<input type="checkbox"/> PD3 <input type="checkbox"/> PSB <sup>*5</sup> <input type="checkbox"/> POD <sup>*1</sup>	910 g
LFX3-75SW-PT-A/B		White	24 V / 18 W	6,800 K			
LFX3-75BL-PT-A/B		Blue	24 V / 9.1 W	469 nm			
LFX3-75IR860-PT-A/B		Infrared	24 V / 14 W	857 nm			
LFX3-100RD-PT-A/B		Red	24 V / 19 W	632 nm			
LFX3-100SW-PT-A/B		White	24 V / 23 W	6,800 K			
LFX3-100BL-PT-A/B		Blue	24 V / 13 W	469 nm			
LFX3-100IR860-PT-A/B		Infrared	24 V / 14 W	857 nm			
LFX3-150RD-PT-A/B		Red	24 V / 25 W	632 nm			
LFX3-150SW-PT-A/B		White	24 V / 35 W	6,800 K			
LFX3-150BL-PT-A/B		Blue	24 V / 19 W	469 nm			
LFX3-150IR860-PT-A/B		Infrared	24 V / 20 W	857 nm			
LFX3-200RD-PT-A/B		Red	24 V / 37 W	632 nm			
LFX3-200SW-PT-A/B		White	24 V / 46 W	6,800 K			
LFX3-200BL-PT-A/B		Blue	24 V / 25 W	469 nm			
LFX3-200IR860-PT-A/B		Infrared	24 V / 27 W	857 nm			

Extension Cables ▶ P.308

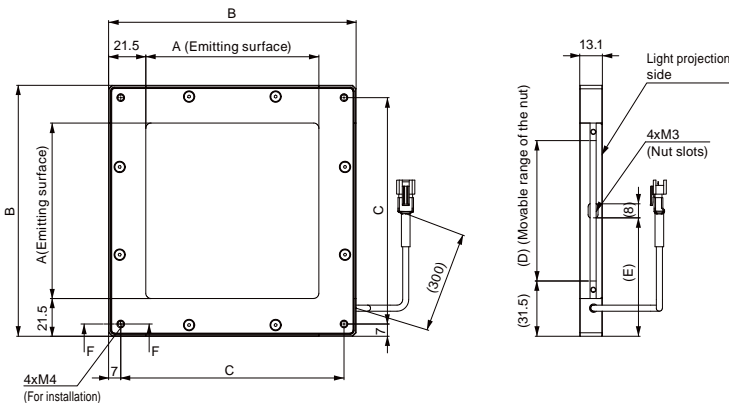
Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

➤ **Dimensions (mm)**

**LFX3-PT-A/B Series**

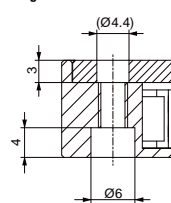
(Common for all colors)



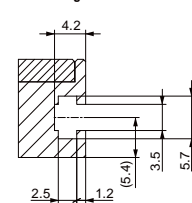
Dimensions by size (mm)

Emitting surface size	Dimensions				
	A	B	C	D	E
50x50	50	93	79	30	42.5
75x75	75	118	104	55	55
100x100	100	143	129	80	67.5
150x150	150	193	179	130	92.5
200x200	200	243	229	180	117.5

Detail Diagram for the F-F Surface



Detail Diagram for the M3 Nut Slot



Imaging may be affected by dirt or dust on the Light Unit's surface. Be careful when handling the emitting surface and do not let dirt, dust, or fingerprints get on the Light Unit.

- Do not touch dirt or dust by hand. Remove by blowing air.
- If the Light Unit is very dirty, use a diluted neutral cleaner and a fine soft cloth to lightly wipe it down.
- If fingerprints get on the Light Unit, wipe them off using a fine soft cloth.

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
- Free Product Trial
- Custom Orders
- Product Details
- Pricing/Quotation
- Discontinued Products

Direct Lighting

- LDR2
- LDR2-LA
- LDR-LA1
- SQR
- SQR-TP

Diffused Lighting

- HPR2
- LFR
- LKR
- FPR
- FPQ2

Direct Lighting

- LDL2
- LDLB
- HLDL2
- HL
- TH2 (5 types)
- TH
- LFL
- HPD2
- LDM2
- LAV
- PDM
- LFX3
- LFX3-PT
- LFV3

Diffused Lighting

- MSU
- MFU

Strobe Lighting

- PF

Water-proof Lighting

- HLDR-IP/ HSL-PCL

Ultraviolet Lighting

- UV2
- UV
- LNSP-UV-FN

Infrared Control Lighting

- IR2
- 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

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

Diffused Lighting

- LNSD
- LND2
- LHND
- LT
- LVN

Oblique/Angled Lighting

- LNDG
- LNSI2
- LNIS
- LNIS-FN

Lenses

- Telecentric Lens
- Macro Lens