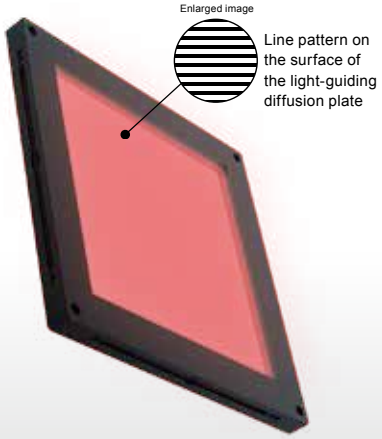
Line Pattern Lights
LFX3-PT series

Refer to our website for product details.
CCS LFX3 Line Pattern ▶ Search
For quick access.
You can also use your smartphone or cell phone.

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

Special Order Products



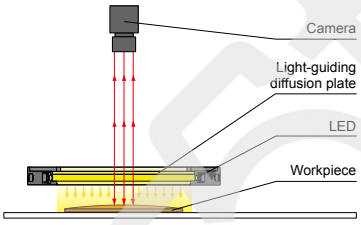
Applications Inspection for bumps on a reflective surface such as mirrors, metal sheets, films, glass parts, liquid crystal parts, etc.

Features

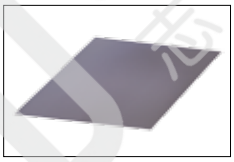
We altered the dot printings on the light-guiding diffusion plate surface to a line pattern. This makes it possible to detect gentle bumps on reflective surfaces which are hard to find with Coaxial Lights.

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 external appearance of metal plate

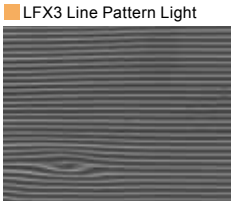


Workpiece: Metal plate

LED Coaxial Light

Coaxial Lights illuminate the whole surface evenly, making it difficult to detect the bumps.

LFX3 Line Pattern Light



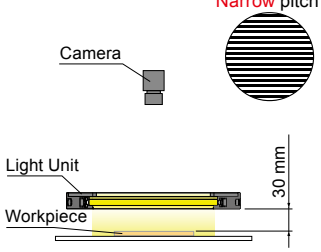
Line Pattern Lights highlight the bumps as curved lines.

Two types of line patterns available

Select one to match your inspection conditions.

Imaging examples

Narrow pitch



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

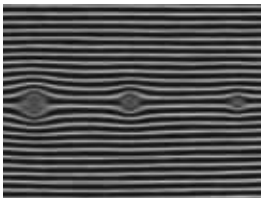
1 mm type

LFX3-PT-A Series

Distance: 30 mm

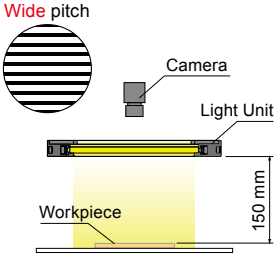
2 mm type

LFX3-PT-B Series



Distance: 150 mm

Wide pitch



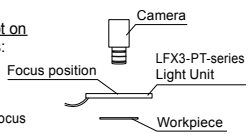
The distance from the Light Unit to the workpiece is long.

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.



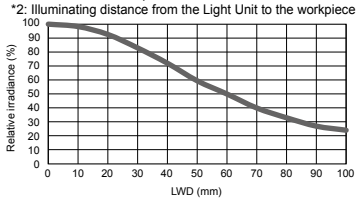
Various technical documents available.
PDF Drawings | DXF Drawings | 3D CAD | Instruction Guides | Product Fliers | Imaging Samples | Data Sheets | Examples of Custom Ordered Products
Download here.
http://www.ccs-grp.com/dl/

Data: Relative irradiance graph (Representative example)

LFX3-100SW-PT-A

Relative irradiance graph (LWD Characteristics)*2

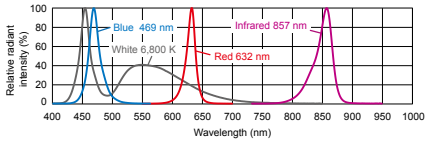
*1: Irradiance on the optical axis
*2: Illuminating distance from the Light Unit to the workpiece



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

LED properties

Spectral distribution



CCS offers you the most suitable lens filter for each wavelength. For details about the lens filter, refer to P.287.

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
Special Orders	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*6 Straight Cable; FCB-W 2-branch Cable; FCB-F 4-branch Cable; FRCB Robot Cable	PD3, CC-ST-1024*2, PSB, POD*1 (*2 Can only use blue and infrared.)	230 g
	LFX3-50SW-PT-A/-B		White	24 V / 12 W	6,800 K			
	LFX3-50BL-PT-A/-B		Blue	24 V / 6.1 W	469 nm			
	LFX3-50IR860-PT-A/-B		Infrared	24 V / 6.6 W	857 nm			
	LFX3-75RD-PT-A/-B		Red	24 V / 13 W	632 nm		PD3, CC-ST-1024*3, PSB, POD*1 (*3 Can only use blue.)	320 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		PD3, PSB, POD*1	400 g
	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		PD3, PSB*4, POD*1 (*4 Cannot use white.)	620 g
	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		PD3, PSB*5, POD*1 (*5 Can only use blue and infrared.)	910 g
	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			

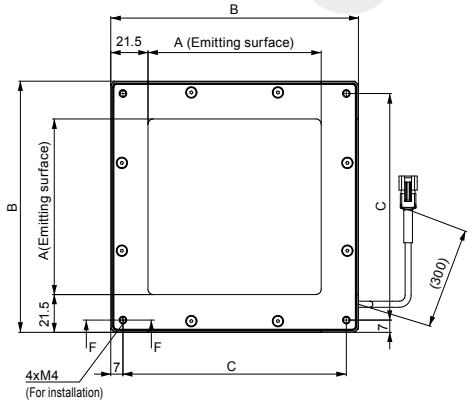
*6 The cables with a model name that ends with "-ME7" or "-EL2" are not included.

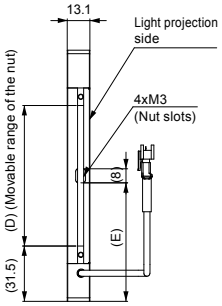
Extension Cables ▶ P.296 | Control Unit Selection Guide ▶ P.243 | List of Control Unit Specifications ▶ P.245

*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)

LFX3-PT-A/-B Series (Common for all colors)

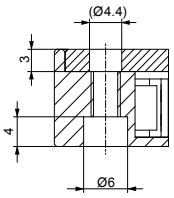




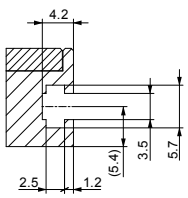
Dimensions by size (mm)

		Dimensions				
		A	B	C	D	E
Emitting surface size	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 finger prints get on the Light Unit, wipe them off using a fine soft cloth.
- If the Light Unit is very dirty, use a diluted neutral cleaner and a fine soft cloth to lightly wipe it down.

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. Requests for Light Unit Selection | Requests for Loan Products | Requests for Estimates | Requests for a Catalog | Product Inquiries | Other Inquiries

Inquire on our website here.
http://www.ccs-grp.com/contact/