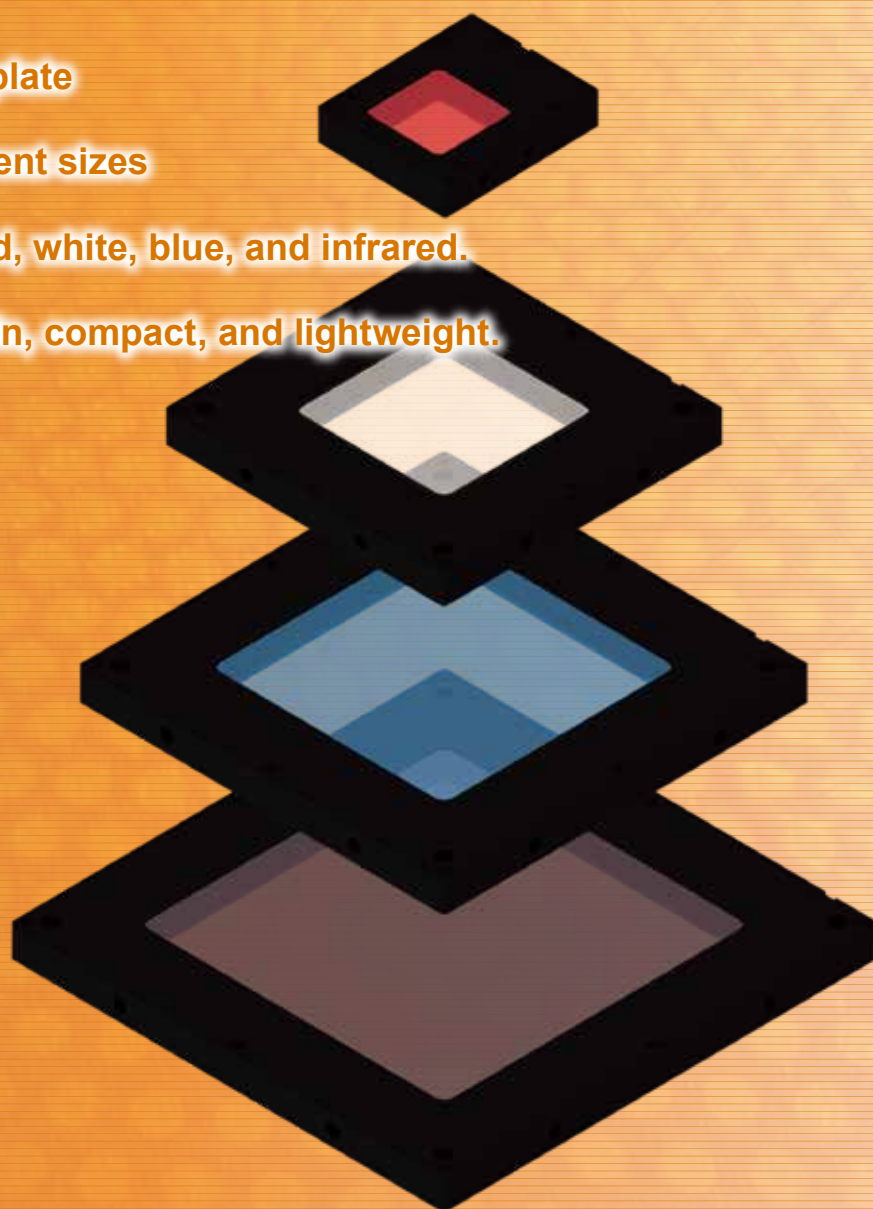


Flat Dome Lights LF XV Series



Industry Leading Flat Dome Light with a Clear Field of View

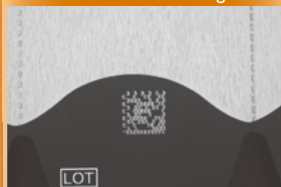
- ☒ Newly developed light-guiding plate
- ☒ Total of 16 models in four different sizes
- ☒ Available in four LED colors: red, white, blue, and infrared.
- ☒ Space-saving case design is thin, compact, and lightweight.



Imaging the Appearance of Capacitors



Imaging the Appearance of
Contact Lens Packages



Imaging the Appearance of Bearings



Imaging the Printed Text
on Food Packages



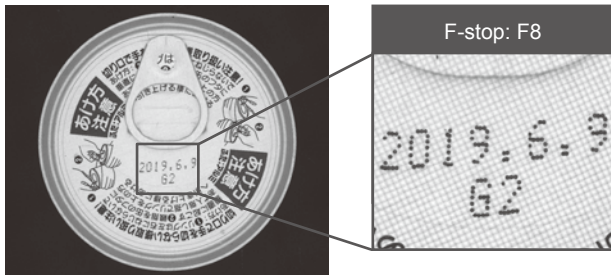
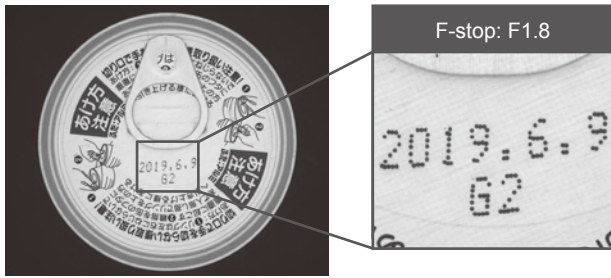


Bright and Clear Field of View Brought by New Light-Guiding Plate

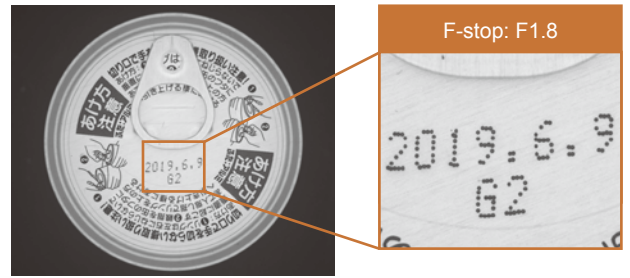
Reduces image irregularities and moire due to the surface dot pattern.

Note: Image irregularities and moire may occur, depending on the capture conditions and the type of the image processing.

● LFX3-100SW (White)



● LFXV-100SW (White)



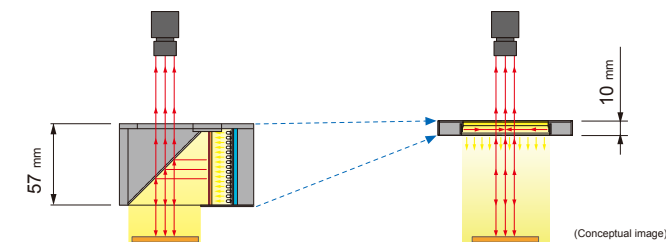
Imaging environment: 5-megapixel camera (effective pixels: 2448x2048, 3.45x3.45 μm , 2/3 inch), 5M-compatible lens (focal length: 25 mm, F1.8-16), Distance between the camera and the workpiece: 290 mm, Distance between the Light Unit and the workpiece: 20 mm
The data included is for reference only. Actual values may vary.

10-mm Thin, Lightweight Case Design for Unparalleled Space-Saving

Achieve illumination similar to Coaxial and Dome Lights in a lighter, more compact unit.

Coaxial Light (LFV3-50)

Flat Dome Light (LFXV-50)



Imaging the Appearance of Button Cell Batteries

● LFV3-50RD (Red)



LWD: 18 mm, Light intensity: 35%

● LFXV-50RD (Red)



LWD: 78 mm, Light intensity: 60%

Suitable for a Wide Range of Applications

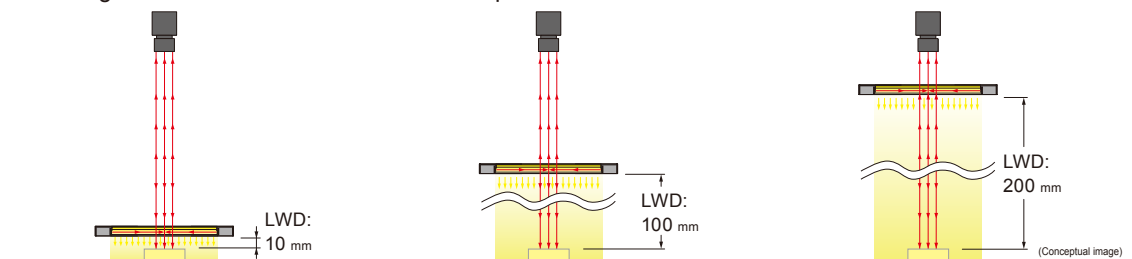
Recreates the effect of Dome Lights when used close to the workpiece.

Recreates the effect of Coaxial Lights when used further from the workpiece.

Imaging Comparison

Changing the distance between the light and the workpiece (LWD) enables optimum imaging for your applications.

Workpiece



At LWD of 10 mm, the whole surface of the workpiece is illuminated uniformly. The bumps are eliminated from the image.



At LWD of 100 mm, the bumps and pull tab are captured.



At LWD of 200 mm, the bumps and pull tab are emphasized.

Total of 16 Models in Four Different Sizes

| Model name | LED color | Power consumption | Peak wavelength / correlated color temperature | Options | Extension cables | Recommended Control Units | Weight |
|---------------|-----------|-------------------|--|---------|---|---|--------|
| LFXV-25RD | Red | 24 V / 1.2 W | 630 nm | - | <div>FCB^{*2} Straight Cable</div> <div>FCB-W^{*3} 2-Branch Cable</div> <div>FCB-F 4-Branch Cable</div> <div>FRCB Robot Cable</div> <div>^{*2} The cables with a model name that ends with "-ME7", "-EL2", "-PF", or "-PF-EL9" are not included. ^{*3} The cables with a model name that ends with "-EL2" are not included.</div> | <div>PD3</div> <div>CC-ST-1024</div> <div>PSB</div> <div>POD*¹</div> | 80 g |
| LFXV-25SW | White | 24 V / 1.3 W | 5,500 K | | | | |
| LFXV-25BL | Blue | 24 V / 1.2 W | 465 nm | | | | |
| LFXV-25IR860 | Infrared | 24 V / 1.2 W | 855 nm | | | | |
| LFXV-50RD | Red | 24 V / 9.1 W | 630 nm | | | | |
| LFXV-50SW | White | 24 V / 9.9 W | 5,500 K | | | <div>PD3</div> <div>CC-ST-1024</div> <div>PSB</div> <div>POD*¹</div> | 190 g |
| LFXV-50BL | Blue | 24 V / 9.3 W | 465 nm | | | | |
| LFXV-50IR860 | Infrared | 24 V / 5.7 W | 855 nm | | | | |
| LFXV-75RD | Red | 24 V / 14 W | 630 nm | | | | |
| LFXV-75SW | White | 24 V / 15 W | 5,500 K | | | <div>PD3</div> <div>PSB</div> <div>POD*¹</div> | 290 g |
| LFXV-75BL | Blue | 24 V / 14 W | 465 nm | | | | |
| LFXV-75IR860 | Infrared | 24 V / 12 W | 855 nm | | | | |
| LFXV-100RD | Red | 24 V / 16 W | 630 nm | | | | |
| LFXV-100SW | White | 24 V / 20 W | 5,500 K | | | <div>PD3</div> <div>PSB</div> <div>POD*¹</div> | 400 g |
| LFXV-100BL | Blue | 24 V / 19 W | 465 nm | | | | |
| LFXV-100IR860 | Infrared | 24 V / 12 W | 855 nm | | | | |

*1 For information on the combination of Light Units and POD-series Control Unit, please refer to our website. <http://www.ccs-grp.com/link/qr/pod>

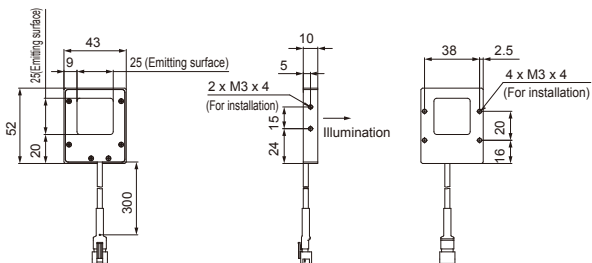
Common Specifications

| | | | |
|---------------------------|---|--------------------------------------|--|
| Input voltage (max.) | 24 VDC | Operating environment (indoors only) | Temperature: 0 to 40°C, Humidity: 20 to 85%RH (with no condensation) |
| Connector | SM connector (SMR-03V-B) | Storage environment | Temperature: -20 to 60°C, Humidity: 20 to 85%RH (with no condensation) |
| Polarity, signal | 1: (+), 2: NC, 3: (-) | Cooling method | Natural air-cooling |
| CE marking | Safety standard: Conforms to EN 62471 | Spectral distribution | |
| Environmental regulations | RoHS compliant | | |
| Case material | Aluminum alloy, Resin (protective plate, light-guiding plate) | | |
| Cable length | 300 mm | | |

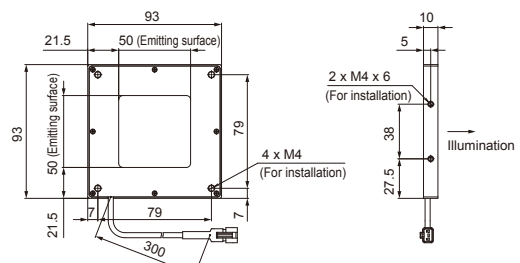
The data included is for reference only. Actual values may vary.

Dimensions (mm)

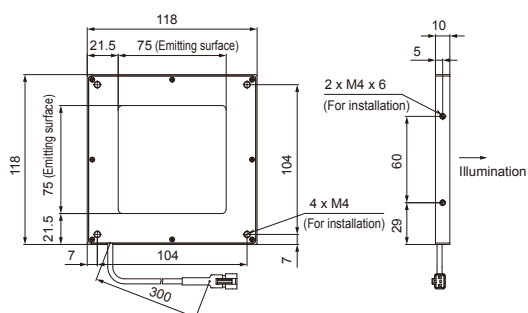
LFXV-25RD/SW/BL/IR860



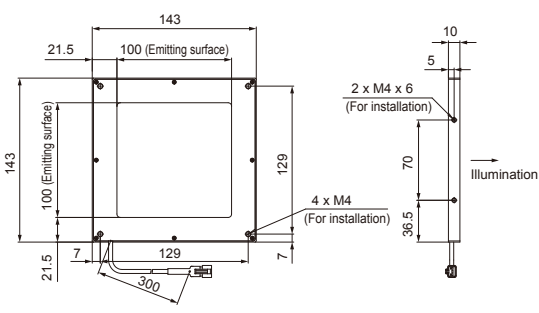
LFXV-50RD/SW/BL/IR860



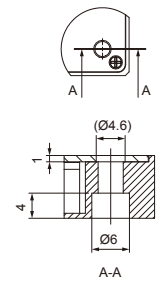
LFXV-75RD/SW/BL/IR860



LFXV-100RD/SW/BL/IR860



Diagrams for 4XM4 Installation Holes



Imaging Examples

Imaging the Appearance of Capacitors

Workpiece



Capacitors

Diffuse Ring Light (Red)



Hairline finishing on the surface makes it difficult to read the printed text.

LFXV-25RD (Red)



The hairline finishing is no longer visible, making it possible to read the printed text.

Imaging the Appearance of Contact Lens Packages

Workpiece



Contact lens

Ring Light (Red)



It is difficult to determine the 2-D code due to the glossy and wavy surface.

LFXV-50RD (Red)



It is possible to determine the 2-D code by evenly illuminating the surface.

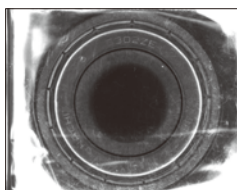
Imaging the Appearance of Bearings

Workpiece



Bearings

Diffuse Ring Light (Red)



Due to reflection from the package surface, it is difficult to clearly image the appearance.

LFXV-100RD (Red)



The whole surface of the package is evenly illuminated and the appearance is clearly imaged.

Imaging the Printed Text on Food Packages

Workpiece



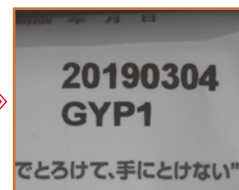
Candies

Diffuse Ring Light (Red)



Due to reflection from the package surface, it is difficult to capture the printed text.

LFXV-100RD (Red)



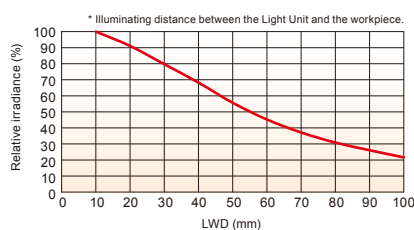
Surface reflection is eliminated and the printed text is clearly imaged.

Data (Representative Examples)

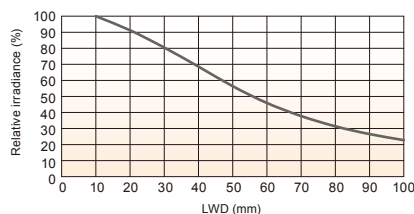
LFXV-100RD (Red)



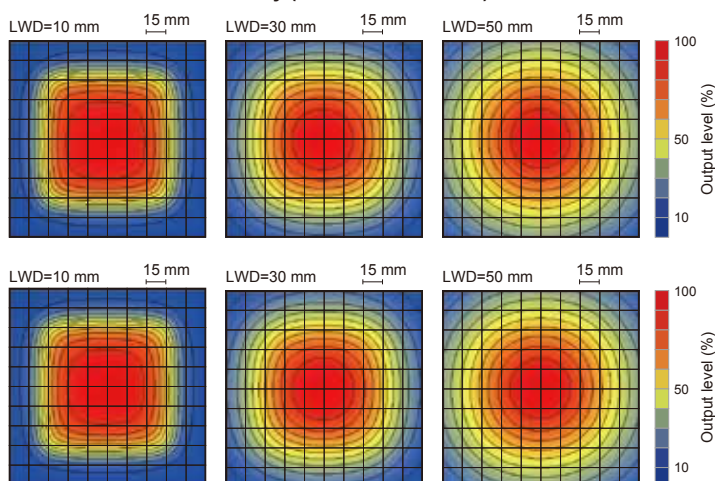
Relative Irradiance Graph (LWD* Characteristics)



LFXV-100SW (White)



Uniformity (Relative Irradiance)



Dirt or dust on the surface of the emitting surface may affect the captured image.

Handle the emitting surface with care. Make sure no dirt, dust, or fingerprints get on the Light Unit.

- Remove dirt and dust by blowing air rather than touching by hand.
- Use a soft, finely woven cloth soaked with diluted neutral detergent to remove any heavy dirt.
- Use a soft, finely woven cloth to wipe away any marks, such as fingerprints.
- Do not use chemicals such as alcohol to wipe the emitting surface.

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Notes

- To ensure proper and safe use of the product, please read the Instruction Guide completely before using the product.
- The design and specifications of this product are subject to change without notification for product improvement.
- The workpiece imaging examples included in this brochure are intended to serve only as references to help you select a suitable Light Unit. Please verify the functionality and conditions required for your particular application before you make a final selection. The sample workpieces used in this brochure have been processed specifically for sample imaging. They are not intended to represent product quality and performance.



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https://www.ccs-grp.com/office/

