

Low-Angle Square Lights

FPQ3 Series

Renewed



Expanded Line with a Total of **24** Models



Comparison of the conventional white or blue models.



Application Examples

- Character recognition on electronic parts,
- Appearance inspection of food containers,
- Appearance inspection of circuit boards and print patterns, etc.

Uniform and diffused illumination from a low angle
High-Output, Square, Low-Angle Lights

FPQ3 **Renewed** series

The FPQ3 series is a low-angle Light Unit perfect for square workpieces. It enables detecting the outline of corners and preventing glare, which are difficult with Ring Lights.

▶ High-Output (2x Conventional Products)

Output has been increased by 2x for white and blue, 1.5x for red Light Units. Furthermore, output is more than doubled when used with a POD-series Strobe Overdrive Control Unit.

Comparison of the conventional products of the same color. The data included is for reference only. Actual values may vary. For information on the POD-series Strobe Overdrive Control Units, refer to our website.



▶ Expanded Line with 8 Sizes and a Total of 24 Models

External sizes of 60 × 60 mm and 50 × 100 mm (rectangular type) are supported.

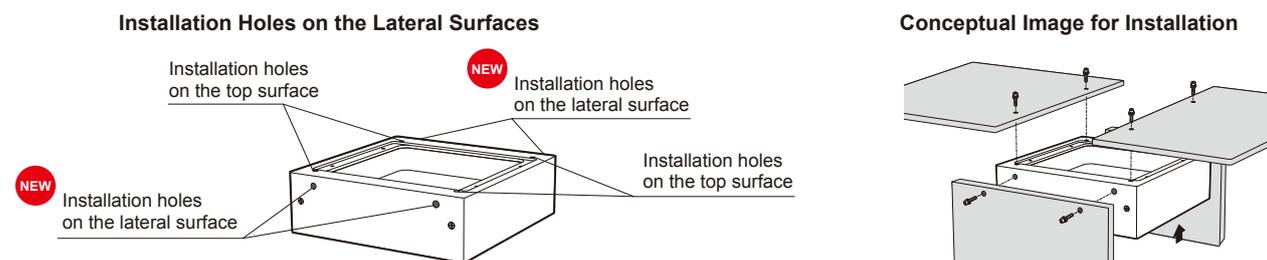
The outer dimensions are not changed for the products of the same size as the conventional products.



▶ High-Flexibility in Installation

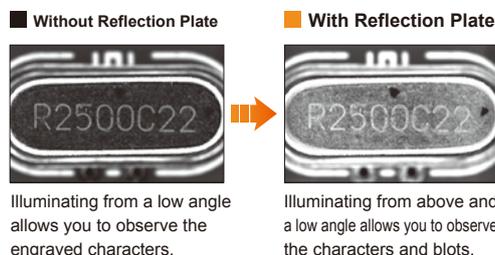
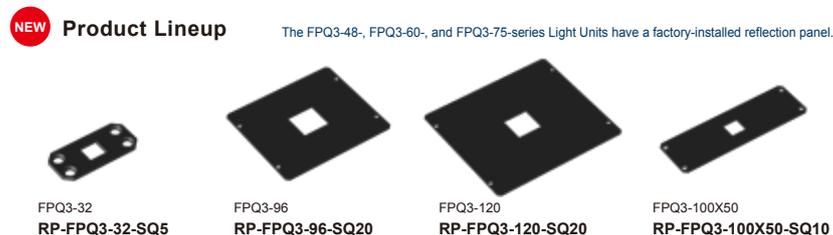
Newly added installation holes on the lateral surfaces of all models increase installation flexibility.

The products of the same size as the conventional products can be installed with the same holes.



▶ Optional Reflection Plates (Sold Separately)

Installing the reflection plate on the Light Unit enhances the dome effect, which enables highly-uniform and diffused illumination.



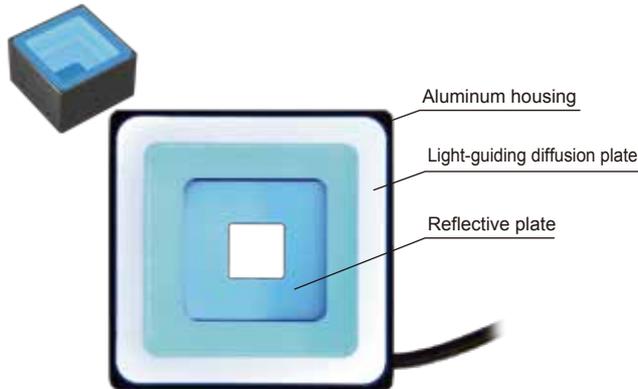
We accept custom orders for the size of the window.

Refer to our website for the detailed information including the dimensions.

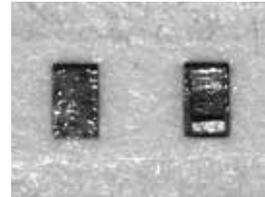
▶ Perfect for Square Workpieces

Light from the LEDs installed above is transmitted through the light-guiding diffusion plate and diffused light is illuminated from four directions on the workpiece from a low angle.

This is perfect for square workpieces.

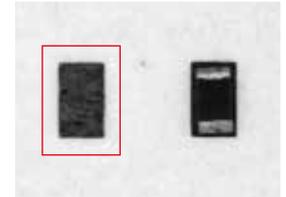


■ When Captured with an LED Ring Light



Glare from the surface of the film makes it difficult to recognize the presence of the part.

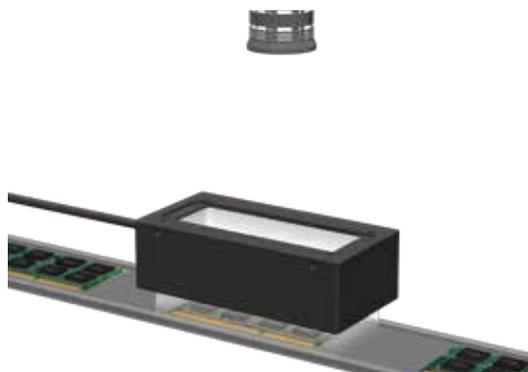
■ When Captured with a Low-Angle Square Light



The glare is removed, making it possible to recognize the presence of the part.

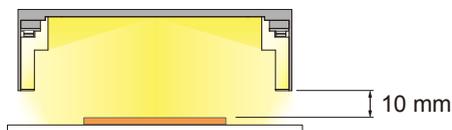
▶ Imaging Examples for the FPQ3-100X50 Light Unit

Illumination from a low angle clearly highlights the outline of workpieces.

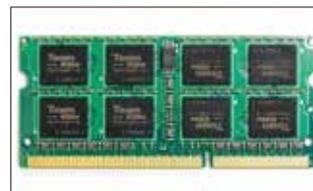


■ Conceptual Image for Illumination

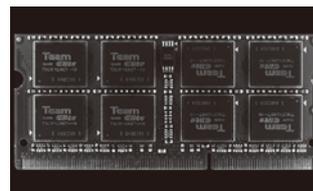
With uniform and diffused light at a low angle from four directions of the workpiece, the corners stand out.



■ Workpiece Image: PC memory boards



■ FPQ2-120SW

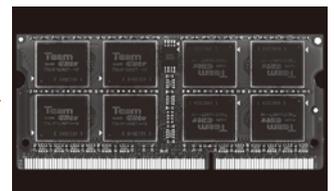


The connector pins are not clearly imaged because the distance between the emitting surface and the workpiece is large. Also, the whole surface of the workpiece is not uniformly illuminated.

FPQ3-100X50SW



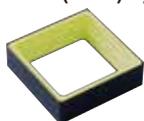
■ FPQ3-100X50SW



The connector pins are clearly imaged because the distance between the emitting surface and the workpiece is short. Also, the whole surface of the workpiece is uniformly illuminated.

▶ Custom Ordered Products

■ Full-color (RGB) Type



Controls red, blue, and green light to create the color you want with just one Light Unit.

If there are workpieces with different colors but the same shape, or if there are different types of products on the same assembly line, you were required to set up the Light Units of different LED colors to detect the features.

Full-color type Light Unit emits and controls red, blue, and green light with a single unit. This enables you to take the best image to meet your needs.

■ Segmented Illumination Type



The segmented emitting surfaces strobe separately to image the peculiarity of the workpiece.

The emitting surface is divided into four segments, which correspond to the four sides of the unit and are separately controlled. This enables the optimum illumination to select the target surface and to fit with the shape of the workpiece.

You can select the brightness, strobing ON/OFF, and the timing for each segment and image the peculiarity of the workpiece.

Attention

The power consumption of the FPQ3 series differs from that of the FPQ2 series.

If you want to replace the latter with the former, be sure to check that the total power consumption of the Light Units is within the output power of the Control Unit.

Specifications

Specifications by Model

Model name	LED color	Power consumption (max.)	Peak wavelength / correlated color temperature (typ.)	Weight (max.)	Model name	LED color	Power consumption (max.)	Peak wavelength / correlated color temperature (typ.)	Weight (max.)
FPQ3-20RD	Red	1.3 W	630 nm	25 g	FPQ3-75RD	Red	12 W	630 nm	155 g
FPQ3-20SW	White	3.1 W	6,000 K		FPQ3-75SW	White	22 W	6,000 K	
FPQ3-20BL	Blue	2.6 W	465 nm		FPQ3-75BL	Blue	16 W	465 nm	
FPQ3-32RD	Red	3.8 W	630 nm	50 g	FPQ3-96RD	Red	13 W	630 nm	170 g
FPQ3-32SW	White	7.1 W	6,000 K		FPQ3-96SW	White	25 W	6,000 K	
FPQ3-32BL	Blue	5.1 W	465 nm		FPQ3-96BL	Blue	18 W	465 nm	
FPQ3-48RD	Red	5.1 W	630 nm	90 g	FPQ3-120RD	Red	16 W	630 nm	220 g
FPQ3-48SW	White	11 W	6,000 K		FPQ3-120SW	White	27 W	6,000 K	
FPQ3-48BL	Blue	7.6 W	465 nm		FPQ3-120BL	Blue	21 W	465 nm	
FPQ3-60RD	Red	7.6 W	630 nm	120 g	FPQ3-100X50RD	Red	11 W	630 nm	135 g
FPQ3-60SW	White	15 W	6,000 K		FPQ3-100X50SW	White	18 W	6,000 K	
FPQ3-60BL	Blue	11 W	465 nm		FPQ3-100X50BL	Blue	13 W	465 nm	

Common Specifications

Input voltage	24 VDC
Case material	Aluminum alloy
Cable length	300 mm
Connector	SMR-03V-B
Polarity, signal	1: (+), 2: NC, 3: (-)
Cooling method	Natural air-cooling
Operating environment	Temperature: 0 to 40°C, Humidity: 20 to 85%RH (with no condensation)
Storage environment	Temperature: -20 to 60°C, Humidity: 20 to 85%RH (with no condensation)
Light spectrum	

If you want to use the Light Units together with a POD-series Strobe Overdrive Control Unit, refer to our website for information on the availability. <http://www.ccs-grp.com/lnk/qr/pod>

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

Dimensions (mm)

FPQ3-20 Series

FPQ3-60 Series

NEW size available

FPQ3-120 Series

FPQ3-32 Series

FPQ3-75 Series

FPQ3-100X50 Series

NEW size available

FPQ3-48 Series

FPQ3-96 Series

Optional Accessories (Sold Separately)

Reflection Panels

- For the FPQ3-32 series
RP-FPQ3-32-SQ5
- For the FPQ3-96 series
RP-FPQ3-96-SQ20
- For the FPQ3-120 series
RP-FPQ3-120-SQ20
- For the FPQ3-100X50 series
RP-FPQ3-100X50-SQ10

The FPQ3-48-, FPQ3-60-, and FPQ3-75-series Light Units have a factory-installed reflection panel. Refer to our website for the detailed information including the dimensions.

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CAUTION

- 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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