

High-Power Strobe Light Source Units

PFBR-600SW-LL-XF PFBR-600SW-LLCF-XF

- Next-generation light sources with a maximum brightness of 38 million lux

Note: Equipped with straight light guide with bound diameter of Ø8 mm and total length of 1000 mm for maximum dimming. Measured value at an irradiation distance of 20 mm from the fiber outer end face (not a guaranteed value)

- Maintenance free (lamp replacement not required)
- Strobe lighting mode (internal trigger mode, external trigger mode) can be selected
- External control via EtherNet, parallel or serial communication
- Dimming setting in up to 1,024 levels (10 bit: 1,024 levels / 8 bit: 256 level)
- Can be used with current light guides



High-Speed Response

This strobe light source unit is a solid-state light source with the high-speed driver circuit which enable to respond in extremely short time from trigger input maximum light emission of less than 1 μ s.

Maintenance-free for greatly reduced workhours

This product is maintenance-free (lamp replacement not required).

The life of a xenon flash lamp is normally 10^8 to 10^9 flashes (approximately 1 billion times), and replacement is necessary.

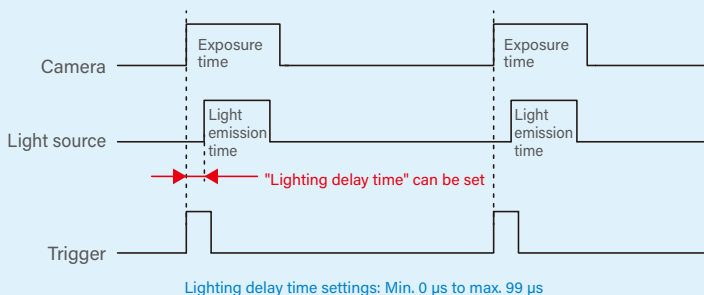
However, this product has a light emission time of 10 μ s and a repetition frequency of 100 Hz, so with 10^9 flashes (about 1 billion times), the light output remains stable even after 2,800 hours.

Fully synchronized with camera exposure timing

The "lighting delay time" can be configured and adjusted to completely synchronize the exposure time and lighting time of the camera.

Achieves a stable imaging environment

"Lighting delay time" setting image



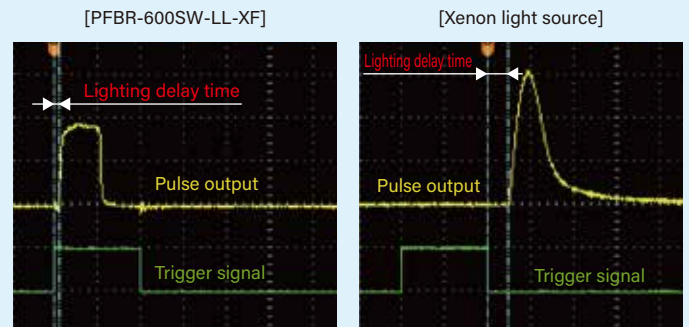
Stable light emission

There is no jitter and no light leakage despite being a xenon flash lamp.

The lighting waveform is a square wave and can control the lighting cycle with a duty ratio of 1% or less using pulse width modulation (PWM).

Responsiveness provides no fluctuation in delay time (jitter) relative to the trigger signal

Comparison of pulse output with xenon light source

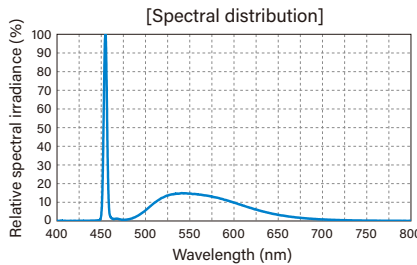


Note: Actual values under our measurement conditions. The data included is for reference only. Actual values may vary.

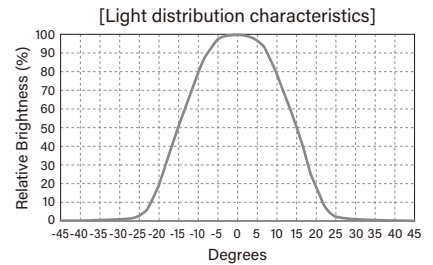
Specifications

Model name	PFBR-600SW-LL-XF	PFBR-600SW-LLCF-XF (Filter Changer Model)
Applicable fiber bundle diameter	Ø8 to Ø14 mm	
Light distribution angle	Total angle of 30°	
Emitting color	White	
Correlated color temperature (typ.)	5,600 K	
Drive method	Constant-current system	
Intensity control method	Variable-current control	
Number of channels	1 channel	
Input power supply	100 to 240 VAC (±10%), 50/60 Hz	
Power consumption (typ.)	350 VA at 100 V input, 370 VA at 240 V input	
Inrush current (typ.)	40 A (From a cold start)	
Ground leakage current	0.5 mA max. (240 VAC, 60 Hz, with 100 % load)	
Insulation withstand voltage (input-output, input-FG)	1,500 VAC for one minute, cutoff current: 10 mA, 500 VDC, 20 MΩ min.	
Operating environment (indoors only)	Temperature: 0 to 40°C, Humidity: 20 to 80%RH (with no condensation) Altitude: 2,000 m max., AC overvoltage: Category II, Pollution degree: 2	
Storage environment	Temperature: -15 to 60°C, Humidity: 20 to 85%RH (with no condensation)	
Cooling method	Forced cooling	
CE marking	Safety standard: Conforms to EN61010-1, EN62311-2008 EMC standard: Conforms to EN61000-6-2, EN61000-6-4 Environmental standard: Conforms to EN50581-2012	
Environmental regulations	RoHS compliant	
Material and surface processing	Aluminum alloy (black alumite)	
Weight	8.0 kg max.	8.5 kg max.
Accessories	Instruction guide, 2-m 3-prong AC power cable with ground terminal For PFBR-600SW-LLCF-XF (Filter Changer Model); Filter holders x 5 pcs., holder mounting screws x 18 pcs.	

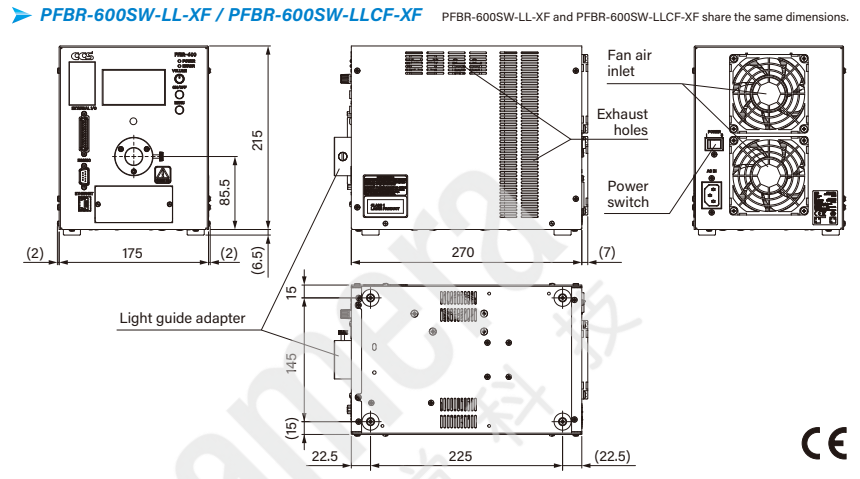
Light Spectrum Characteristics



Distribution Characteristics of Fiber Output Edge



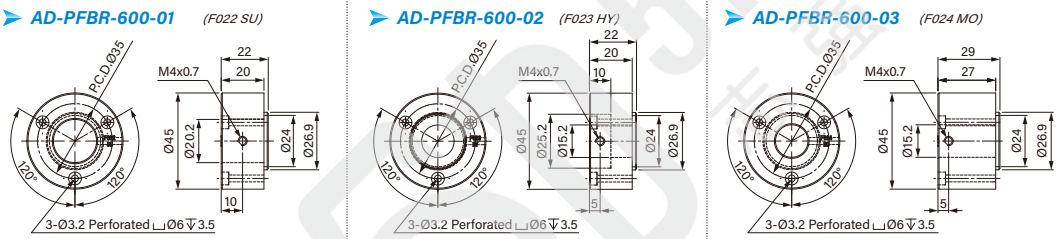
Dimensions (mm)



Options

Light guide adapter

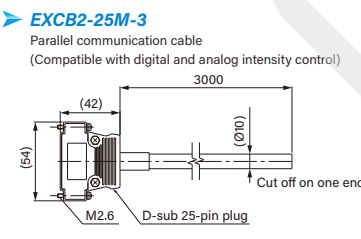
3 types of adapters are available to suit the light guide being used. Adapters not listed can also be custom manufactured to order.



- Please be aware that the light guide adapter must be installed after purchase by the customer.
- We accept custom orders for the light guides. Please contact your CCS sales representative for details.

External Control Cables

Select an appropriate cable, depending on the communication method.

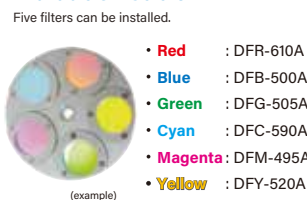


- Serial communication cable
Purchase a commercially available RS-232 crossover cable (length: 3 m max.) for the serial communication cable.
- EtherNet communication cable
Purchase a commercially available LAN cable (length: shorter than 30 m) for the Ethernet communication cable. Refer to the instruction guide for more information.

Color Filters [Exclusively for PFBR-600SW-LLCF-XF (filter changer equipped models)]

Use filters to emit the optimum light for the inspected workpiece.

Available Six Colors



- A variety of filters are available with excellent heat resistance.
- Contact your CCS sales representative for the detailed information.

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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.

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