LED Light Source Unit
PFBR-150SW Series

Provides light output that exceeds that of a 250-W metal halide light source
Achieves the highest level in the industry with 2 million lx

Caution
This product emits high-intensity visible light. Heat-sensitive or flammable light-absorbing materials may be damaged because light-absorbing materials convert incident light into heat. Check the instructions in the Instruction Guide and use this product in a safe manner.
**LED Light Source Unit**

**PFBR-150SW**

- Provides light output that exceeds that of a 250-W metal halide light source
- Achieves the highest level in the industry with 2 million* lx
  * Actual measurement values with a bundle of Ø10 mm, a straight light guide with a total length of 1,080 mm installed, and at a position 50 mm away from the fiber output edge. (Results may vary for individual units.)
  * Current as of our in-house inspection in Feb. 2014.

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**LED light source unit that exceeds a 250-W metal halide light source**

**Optical design is optimized for all types of fiber to provide high output**

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**1,024-step intensity. Linear characteristics with reproducibility**

- Our unique correction function is a standard function. Provides linearity with reproducibility
  - Intensity value can be adjusted in steps
    - 1024-step intensity (10-bit)
    - 256-step intensity (8-bit)

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**Equipped with a light output stabilization (feedback) function**

- Our unique stabilization function maintains brightness fluctuation within ±3%.
  - Functions effectively even when there are variations within the ambient operating temperature range.
    (Effective when used in the following range: Operating temperature of 5 to 40 °C and intensity value from 40 to 80%.)

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**Stable light output even in severe operating environments**

- Stabilization function on ±3%
  - Stabilization function is set to off when shipped from the factory.

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Operating status can be monitored by using the monitoring function
Displays operating status such as LED temperature, internal circuit board temperature and operating time.

**Operation display 1**
1. Operating mode
2. Feedback function icon
3. Light ON icon
4. Intensity resolution
5. Intensity value
6. Intensity indicator

**Operation display 2**
7. Total time
8. Internal circuit board temperature
9. LED temperature
10. Lock icon
11. Intensity step magnification

**Mode setting display**

External control by use of a large variety of communication methods

- Digital communication control: Compatible with sink and source types
- Serial communication control: RS-232C
- Analog communication control: Intensity control from 0 to 5 V
- Ethernet communication control: TCP/IP and UDP/IP protocols

Standard compatibility with three types of light guides
Check the dimensions of the light guide to be used before selecting an adapter. * Be careful as plastic fiber cannot be used.

Flexible customization

- Compatible with fiber in bundles from Ø3 to Ø22 mm.
- Adapter can be manufactured for compatibility with light guides of various manufacturers.
- Linear characteristics (intensity curve) can be customized.
- Light distribution characteristics can be optimized by customizing optical lenses.

Long product life of 30,000 hours

Product life comparison of PFBR and 250-W metal halide light source

250-W metal halide light source 2,000 hrs.
PFBR-150SW 30,000 hrs.

15 times

Light spectrum characteristics

Light spectrum comparison of PFBR and 250-W metal halide light source

250-W metal halide light source
PFBR-150SW

* Refer to the Instruction Guide for details of displayed contents.

* Please be aware that the light guide adapter must be installed after purchase by the customer. Inquire with the CCS Sales Dept. regarding sizes not listed here.

* Calculated values up to intensity of 100%, ambient temperature of 25 °C, and light output drop up to 70%. (Results may vary for individual units.)

* Actual measurement values using our measurement conditions. (Results may vary for individual units.)
**Specifications**

**Model**: PFBR-150SW-MN

**Applicable fiber bundle diameter**: Ø8 to Ø14 mm

**Light distribution angle**: Total angle of 30°

**LED color**: White

**Corrosion color temperature (typ.)**: 6500 K

**Drive method**: Constant-current drive

**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.)**: 200 VA

**Inrush current (typ.)**: 15 A at 100 VAC, 30 A at 200 VAC

**Withstand voltage**: 1,500 VAC for one minute, cutoff current: 10 mA, 3.5 mA max. (264 VAC, 60 Hz, with no load)

**Insulation current**: 2,000 m max., Transient overcurrent: Category II, Pollution level: 2

**Output voltage**: 5 to 40°C, Humidity: 20 to 80%RH (with no condensation)

**Inrush current (typ.)**: 15 A at 100 VAC, 30 A at 200 VAC

**Power consumption (typ.)**: 200 VA

**Input power supply**: 100 to 240 VAC (±10%), 50/60 Hz

**Number of channels**: 1 channel

**Weight**: 3.9 kg max.

**Cooling method**: Forced cooling

**CE marking**: Safety standard: EN61010-1 compliant

**EMC standard**: Complies with EN61000-6-2 and EN61000-6-4

**Material and surface processing**: Aluminum alloy (black alumite)

**RoHS compliant**: Yes

**Environmental regulations**: RoHS compliant

**Accessories**: One Instruction Guide and one 2-m 3-prong AC power cable

**Options**

**Light guide adapters**

- **AD-PFBR-150-MO**
- **AD-PFBR-150-HY**
- **AD-PFBR-150-SU**

**External control cables**

- **EXCB2-2SM-3**
- **EXCB2-9M-9F-3-CR**

**Data**

**Light spectrum characteristics**

![Light spectrum characteristics](image)

**Light distribution characteristics of fiber output edge**

![Light distribution characteristics](image)

**CAUTION**

- To use this product safely and correctly, be sure to read the Instruction Guide before use.
- The design of this product is subject to change without notification.

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**CCS Inc.**

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