Vision Light Tech
creating optical solutions

LIGHTING SOLUTION

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

CE

CCS Inc.

LED Light Source Unit

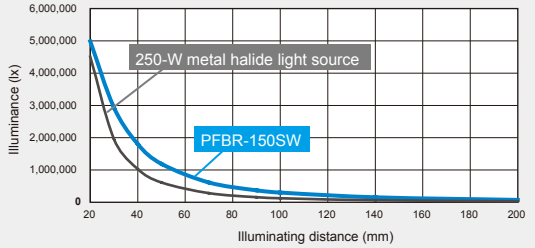
PFBR-150SW

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

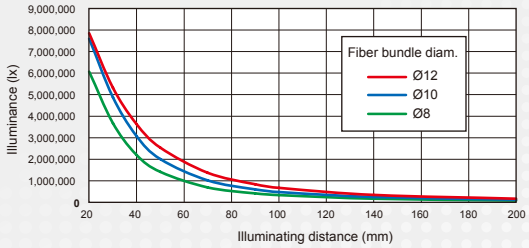
* Actual measurement values with a bundle of Ø10 mm, a straight light guide with a total length of 1,080 mm installed, and at a position 50 mm away from the fiber output edge. (Results may vary for individual units.)
* Current as of our in-house inspection in Feb. 2014.

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



* Actual measurement values with intensity of 100%, a bundle of Ø8 mm, a straight light guide with a total length of 1,100 mm installed, and at positions at each illuminating distance away from the fiber output edge. (Results may vary for individual units.)

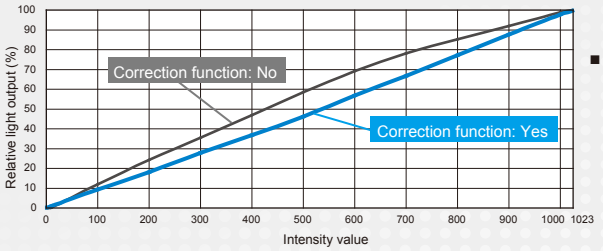
Optical design is optimized for all types of fiber to provide high output



* Actual measurement values with intensity of 100%, bundles of Ø8, 10, and 12 mm, a straight light guide with a total length of 1,080 mm installed, and at positions at each illuminating distance away from the fiber output edge. (Results may vary for individual units.)

1,024-step intensity. Linear characteristics with reproducibility

Our unique correction function is a standard function. Provides linearity with reproducibility



* Actual measurement values using our measurement conditions (Results may vary for individual units.)
The correction function of this product is always set to "Yes".

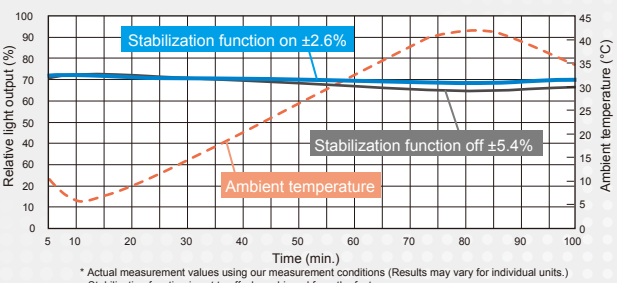
■ Intensity value can be adjusted in steps

- 1024-step intensity (10-bit)
- 256-step intensity (8-bit)

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%.)

Stable light output even in severe operating environments

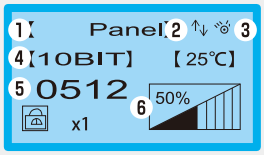


* Actual measurement values using our measurement conditions (Results may vary for individual units.)
Stabilization function is set to off when shipped from the factory.

Operating status can be monitored by using the monitoring function

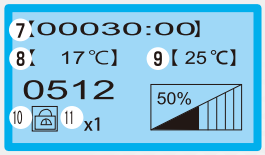
Displays operating status such as LED temperature, internal circuit board temperature and operating time.

Operation display 1



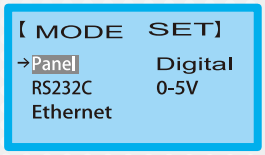
(1) Operating mode
(2) Feedback function icon
(3) Light ON icon
(4) Intensity resolution
(5) Intensity value
(6) Intensity indicator

Operation display 2



(7) Total time
(8) Internal circuit board temperature
(9) LED temperature
(10) Lock icon
(11) Intensity step magnification

Mode setting display



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

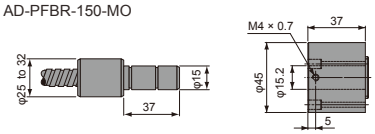
External control by use of a large variety of communication methods

- **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**

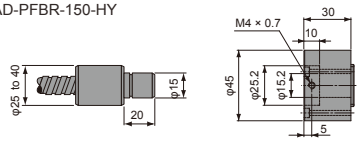
Standard compatibility with three types of light guides

Check the dimensions of the light guide to be used before selecting an adapter. * Be careful as plastic fiber cannot be used.

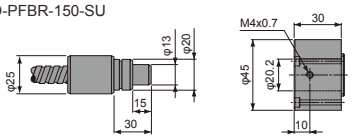
AD-PFBR-150-MO



AD-PFBR-150-HY



AD-PFBR-150-SU



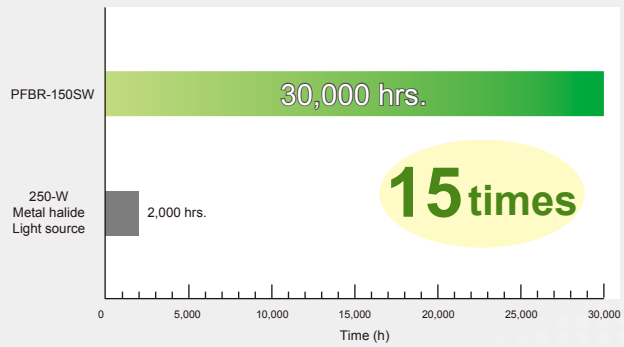
* Please be aware that the light guide adapter must be installed after purchase by the customer. Inquire with the CCS Sales Dept. regarding sizes not listed here.

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

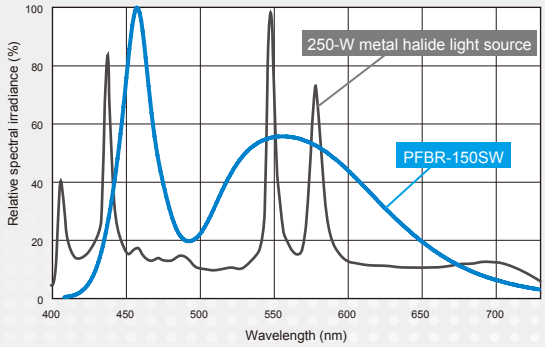
Product life comparison of PFBR and 250-W metal halide light source



* 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.)

Light spectrum characteristics

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



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

Specifications

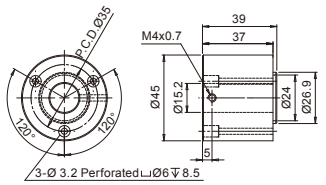
Model	PFBR-150SW-MN
Applicable fiber bundle diameter	Ø8 to Ø14 mm
Light distribution angle	Total angle of 30°
LED color	White
Correlated color temperature (typ.)	6500 K
Drive method	Constant-current drive
Intensity control method	Variable-current control
Number of channels	1 channel
Input power supply	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 * From a cold start
Ground leakage current	3.5 mA max. (264 VAC, 60 Hz, with no load)
Insulation withstand voltage (Input-FG)	1,500 VAC for one minute, cutoff current: 10 mA, 50 VDC, 20 MΩ min.
Operating environment	Temperature: 5 to 40°C, Humidity: 20 to 80%RH (with no condensation) Altitude: 2,000 m max., Transient overcurrent: Category II, Pollution level: 2
Storage environment	Temperature: -15 to 60°C, Humidity: 20 to 85%RH (with no condensation)
Cooling method	Forced cooling
CE marking	Safety standard: EN61010-1 compliant EMC standard: Complies with EN61000-6-2 and EN61000-6-4
Environmental regulations	RoHS compliant
Material, coating, and surface processing	Aluminum alloy (black alumite)
Weight	3.9 kg max.
Accessories	One Instruction Guide and one 2-m 3-prong AC power cable with ground terminal

Options

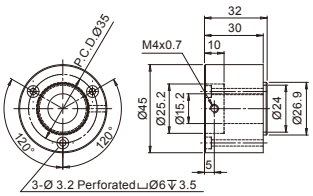
Light guide adapters

Accessories: One light guide lock screw, three hexagon socket bolts, one hexagon wrench

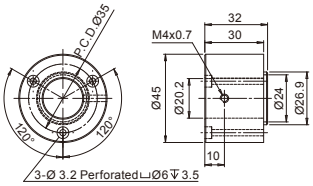
AD-PFBR-150-MO



AD-PFBR-150-HY



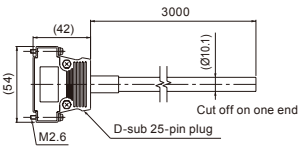
AD-PFBR-150-SU



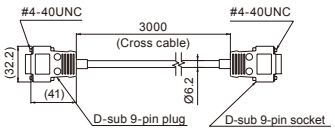
External control cables

Select an appropriate cable according to the communication method.

EXCB2-25M-3
Parallel communication cable
(Compatible with digital and analog intensity)



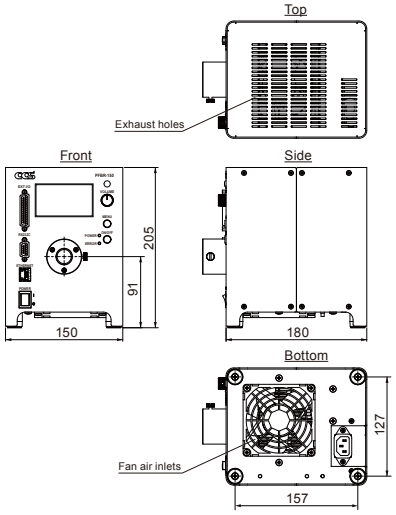
EXCB2-9M-9F-3-CR
Serial communication cable (RS-232C)



- A light guide adapter is not provided with this product. Order one separately.
- Inquire with the CCS Sales Dept. regarding the light guide adapter not described here.

Dimensions (mm)

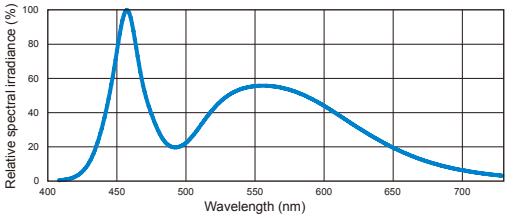
PFBR-150SW-MN



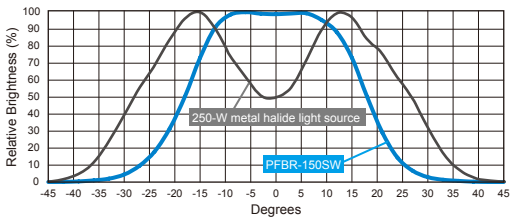
* The shape of the light guide adapter depends on the details of the order.

Data

Light spectrum characteristics



Light distribution characteristics of fiber output edge



* Actual measurement values with intensity of 100%, a bundle of Ø8 mm, a straight light guide with a total length of 1,100 mm installed, and at a position 600 mm away from the fiber output edge. (Results may vary for individual units.)

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.

CCS Inc.

Headquarters
Shimodachiuri-agaru, karasuma-dori, kamigyo-ku,
Kyoto 602-8011 JAPAN
TEL : +81-75-415-8284 / FAX : +81-75-415-8278
URL : http://www.ccs-grp.com/
E-mail : sales@ccs-inc.co.jp

CCS America, Inc
5 Burlington Woods Suite 204 Burlington, MA 01803 USA
TEL : +1-781-272-6900 / FAX : +1-781-272-6902
URL : http://www.ccsamerica.com/
Email : info@ccsamerica.com

CCS Europe NV/SA
Bergensesteenweg 423, Bus 13
1600 Sint-Pieters-Leeuw, Belgium
TEL : +32-(0)2-333-0080 / FAX : +32-(0)2-333-0081
Email : info@ccseu.com

CCS Asia PTE LTD
63 Hillview Avenue #07-10, Lam Soon Industrial Building,
Singapore 669569
TEL : +65-6769-1669 / FAX : +65-6769-3422
URL : http://www.ccs-asia.com.sg/
Email : sales@ccs-asia.com.sg

CCS Inc. Shanghai Office
Room 308B-309, CIMIC Tower No.1090 Century Avenue,
Pu Dong New Area, Shanghai 200120, P.R. China
TEL : +86-21-5835-8728 / FAX : +86-21-5835-8928
Email : ccschina@ccs-inc.co.jp

CCS Inc. Shenzhen office
17B,China Economic Trade Building, 7Rd Zizhu, Zhuzilin, Futian
District, Shenzhen 518040 P.R.China
TEL : +86-755-8279-0477 / FAX : +86-755-8279-0478
Email : ccschina@ccs-inc.co.jp

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