



USER MANUAL

**BPS100 Photo Feedback
Controlled High Stability
Tungsten Light Source**



BPS100 Tungsten Source
(Mounting post sold separately)

Introduction

The BPS100 series is a line of low cost and high performance constant photo intensity tungsten light source products. By use of photo intensity feedback control the BPS100 demonstrates up to one order of magnitude improvement in output power stability compared with conventional source when operated under constant current mode. The BPS100 is ideal for spectroscopic applications in visible and near IR.

Specifications

Power input:	5 V DC @ < 1.0 A
Operating temperature:	0° to 40° C
Light bulb:	Gas filled tungsten
Rated power:	4.5 W
Lifetime:	> 5,000 hours at rated conditions
Filter holder:	For filters 0.5" in diameter at < 0.25" thickness
Light coupling:	SMA 905



BPS100 accessories

Power supply input:	100 - 240 V AC for factory default power supply
Power supply output:	5 V DC @ 1.6 (or 2.0) A

Remote port:	4 pin RJ11 connector
Control functions:	Modulation and on/off controls Operating current monitoring

Modulation input:	Analog DC input. 0 - 5 V better than 1.5 Hz, corresponding to minimum and maximum output power setting
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Remote on/off control:	TTL logic input, 0 or 5 V DC, up to approximately 15 Hz
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Current monitoring:	DC output, 0 - 1 V corresponding to approximately 0 - 1 A operating current
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Installation

Electrical

Follow the procedures as described below for the electrical installations.

1. Plug in the supplied power supply connector into the matching receptacle on the rear panel.
2. Plug the power supply AC into an outlet, 100 - 240 V AC.



Power supply connection



Remote port RJ11 connector

3. The supplied RJ11 connector may be used for remote control purpose. The following table describes the pinouts and color code of the control signals:

NOTE: The BPS100 operates via the on/off power switch without the need for connecting the RJ1 remote control connector. Use the RJ11 connector only for remote needs to be performed.

Table I. Remote control port signals

Pin #	Color	Description
1	Black	Ground
2	Red	Analog modulation control input: 0 V DC: Minimum output power setting 5 V DC: Maximum output power setting
3	Blue or Green	TTL remote on/off or modulation control input Logic "1": Output enabled Logic "0": Output disabled
4	Yellow	Lamp operating current monitoring output 1.0 V DC corresponds to approximately 1.0 A

4. Turn on the power switch located on the rear panel. The light source will start to emit after a short delay and slow ramping.

Optical



Filter holder assembly

IMPORTANT NOTICE:

There is a filter holder incorporated into the BPS100 light source for possible use with optical filters. Always turn off the light source power before loading filters or removing the filter holder. Failure to do so may result in damage to the light bulb.

1. Connect an optical fiber jump cable to the emission port of the BPS100. Make sure to tighten the SMA 905 mounting cap.



Filter holder orientation. Short distance side should face the front panel when install

2. In case a filter needs to be loaded shut off the light source power and then remove the two mounting screws on the filter holder lid. Load filter(s) and secure the filter(s) by using the set screw located on the bottom of the filter holder.

3. Reattach the loaded filter holder and fasten it with the two mounting screws.

NOTE: The filter holder needs to be installed into the BPS100 housing in the orientation that the filter is close to the front panel side. Installation of the filter so that the filter part is close to the light bulb may result in inappropriate operations of the source.

WARRANTY TERMS AND CONDITIONS

B & W TEK's end user products, OEM modules, and components are warranted to be free from defects in materials and workmanship for a period of 12 months, 6 months, and 90 days, respectively, from the date of initial shipment. This warranty does not extend to incidental or consequential damages and to damage caused by negligent or improper handling in use, storage, nor for products for which the original identification markings or labels have been removed, defaced or altered.

Special contracts or contracts for nonstandard products may have modified terms of warranty and, in such cases, the terms as stated in the individual contract must be signed by the duly authorized officer of B & W TEK and will supersede the standard terms.

B & W TEK will make final determination as to cause or existence of defect and, at its option repair or replace the products, which prove to be defective during the warranty period. Products replaced under warranty will be warranted only for the balance of the warranty period from the original supplied equipment.

This warranty extends only to the original purchaser of the equipment from B & W TEK. The purchaser must notify B & W TEK within 15 days of first noticing the defect and promptly return the defective product upon receipt of RMA number(s) before expiration of the warranty period.

Products believed by purchaser to be defective shall be returned to B & W TEK transportation and insurance prepaid by purchaser. Repaired or replaced products will be returned to purchaser by B & W TEK, FOB city destination within the Continental United States, Transportation beyond these limits will be charged to purchaser.

Warranty Return Procedures

Review terms of purchase and date of shipment to determine validity of warranty claim. Warranty claim should only be made for products within terms of warranty policy.

Contact B & W TEK and obtain authorization to return the item(s) in the form of an RMA (Return material authorization) number. For customers in the USA and countries where distributorship and/or representation is not available, all claims should be addressed to:

Customer Service
B & W TEK INC.
19 Shea Way
Newark, DE 19713

Be prepared to furnish:

- a. Product Model number and serial number;
- b. Date of shipment/purchase;
- c. Brief description of the problems encountered;
- d. Name of contact person and phone number(s) at your organization for further communication

Obtain B & W TEK's instructions for transportation and packaging and ship the product (freight and insurance prepaid) with the proper documentation containing the RMA number and the information specified above.

B & W TEK will advise the purchaser of its determination of warranty at the earliest possible time. Providing complete information as requested will expedite the procedure.