



111 Highland Drive - Putnam, CT 06260  
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[www.spectralproducts.com](http://www.spectralproducts.com)

# 20W Tungsten-Halogen Light Source

- ASB-W-020 -

## Operation Manual





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## Important Safety Notices

1. Never look directly into the light beam, including through the cooling fan while light is on, as this can cause eye damage.
2. Do not remove or modify any installed safety device on this equipment. Doing so will void your warranty and create an unsafe operating environment.
3. Do not use the unit if it is damaged in any way. Contact your dealer for repair or replacement information.

## Warranty and Liability

This SP's product is warranted against defects in material and workmanship for a period of one year from the date of shipment. During the warranty period, Spectral Products will, without charge, repair or replace, at its discretion, the defective product or component parts.

For warranty service or repair, this product must be returned to a service facility designated by Spectral Products (SP). For products returned under warranty, the Buyer shall prepay shipping charges (including shipping charges, duties, and taxes for products returned to SP from another country), and SP will pay for shipping charges to return the product to the Buyer.

This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations, modifications or repairs, if the serial number is altered, defaced or removed, the improper or inadequate maintenance by the Buyer, Buyer-supplied software or interfacing, or improper site preparation or maintenance. No other warranty is expressed or implied. SP shall not be liable for any consequential damages, including without limitation, damages resulting from loss of use, as permitted by law.



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## General Information

The ASB-W-020 is a compact light source assembly with a tungsten-halogen lamp that emits in the 300 to 2500 nm region. It has been designed to transfer the maximum possible illumination to a variety of fibers. The tungsten-halogen lamp of the ASB-W-020 is a near blackbody source with a built-in fused silica lens that focuses the light to the fiber. Figure 1 shows blackbody spectral distributions at various color temperatures in Kelvin (K). The ASB-W-020 spectral distributions resemble those of spectrum curves out to approximately 2500nm, beyond which the transmissions of the fused silica lens limits the output.

In addition to the 20 Watt tungsten-halogen lamp (ASB-W-020B), the ASB-W-020 features a lamp housing and a current regulator to assure a stable output. The housing contains an adjustable lamp mount. A variety of flanges allow the mounting of different fiber terminations, from a single fiber to bundles.

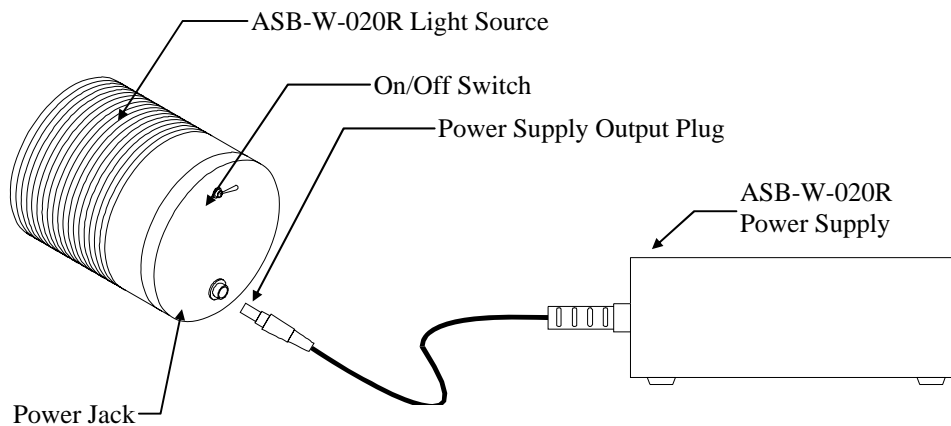
The 20 Watt lamp used in the ASB-W-020 has a nominal color temperature of 3100 K and regulated power input assures an average life of 2000 hours.

The power supply provided with the ASB-W-020 is a desktop case which can operate from an AC source between 90-230VAC.

Use in a well ventilated area.

## Installation and Operation

1. Connect the power supply output plug into the power jack on the rear of the ASB-W-020 light source. (see **Figure below**)
2. Plug in the ASB-W-020 light source power supply into a 110V-120V ac wall outlet.
3. Turn on the light source and allow to warm up for 10 minutes in order to stabilize the output.



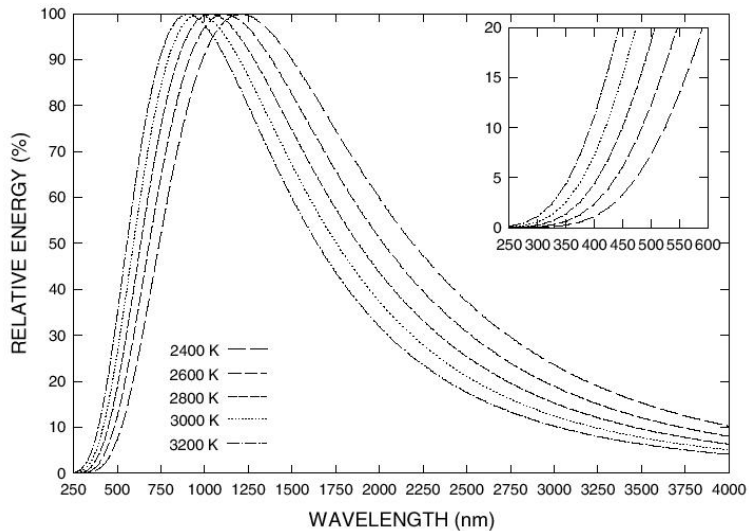
**Figure** ASB-W-020 Light Source and Power Supply Installation Diagram

# Specifications

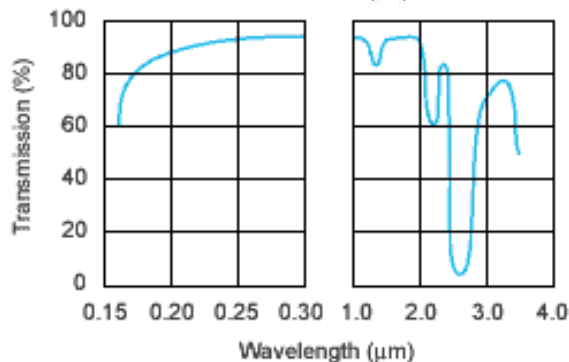
Lamp	Tungsten/Halogen
Power	Desktop Transformer, Vin 100 - 240 VAC, 50/60 Hz, Vout 24VDC @ 2.91 Amps
Current Regulation	Built-in, +/- 0.4%
Color Temperature	3100 K
Bulb Life	2,000 hours average (nominal)
Spectral Distribution	near blackbody
Housing	Aluminum, forced air cooled, Limited focus adjustment
Connector	SMA fiber connector (10mm diameter termination optional)
Warranty	One year

# Spectrum Curves

**Black body Radiation Curves**



**Fused silica Transmittance Curve**



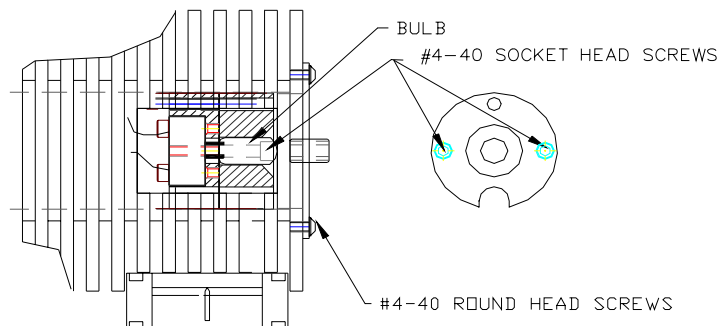
## CHANGING THE BULB

### 1. Removing the old bulb

Unscrew the two #4-40 round head screws holding the SMA adaptor plate on the front face of the light source housing. Remove plate and unscrew the two #4-40 socket cap screw holding the lamp spacer. By tilting the lamp assembly slightly, the lamp spacer should fall out. This will expose the bulb which then can be removed by pulling it forward out of the socket. The wearing of protective hand gear is recommended for this procedure.

### 2. Installing the new bulb

To prolong the life of the bulb it is recommended that the bulb is not handled with bare hands. For installing the bulb please use finger cots or rubber gloves. Insert the bulb into the front of the light source housing aligning the bulb pins with the holes in the socket. Gently push the bulb until it is firmly seated in the socket. Replace the lamp spacer and secure with the two #4-40 socket screws. Re-install the adaptor plate.





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## Technical Support

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