B&W TEK INC.
Your Spectroscopy Partner

SPECTROMETERS | LASERS | TOTAL SOLUTIONS

Light Source

BDS100

Deuterium/Tungsten Light Source

The BDS100 is a turnkey fiber coupled UV/Vis/NIR light source providing spectral output from 200 to >1100nm. The 3W electrode-less RF induced Deuterium lamp provides UV emission and offers the advantage of low heat generation and low power consumption. The 3W Tungsten (W) Halogen lamp shares the optical path with the Deuterium (D2) lamp and provides Vis/NIR emission. The BDS100 features a safety shutter and individual On/Off controls for both the Deuterium and Tungsten lamps as well as a SMA 905 connector for fiber optic light coupling. It also includes a DC power supply. The BDS100 is ideal for spectroscopic applications because no fiber alignment is needed.

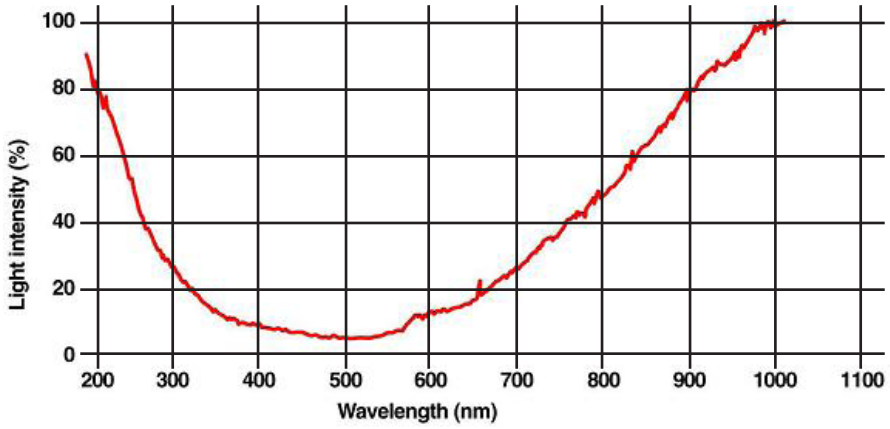
Applications:

- **Transmission Experiments**
- **Absorption Experiments**

Features:

- Fiber Coupled
- UV/Vis/NIR Single Path
- Shutter Control
- High Stability
- Compact
- Long Life

Typical Relative Spectral Distribution

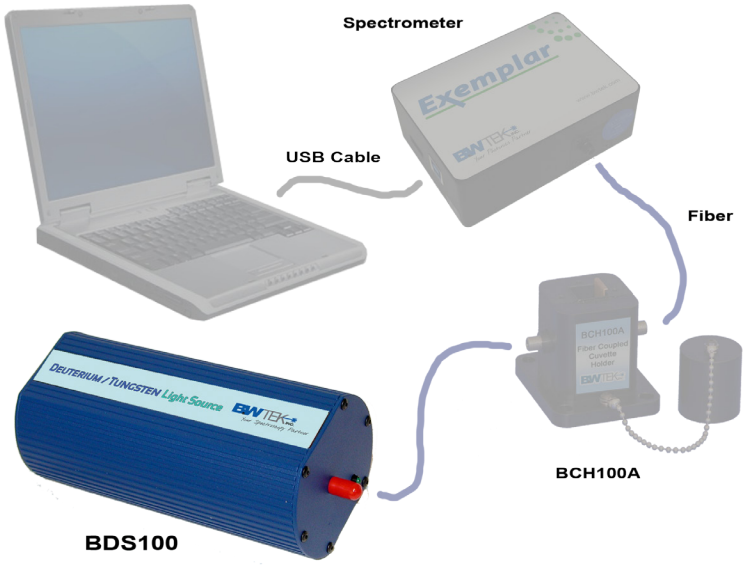


BDS100 Rear View

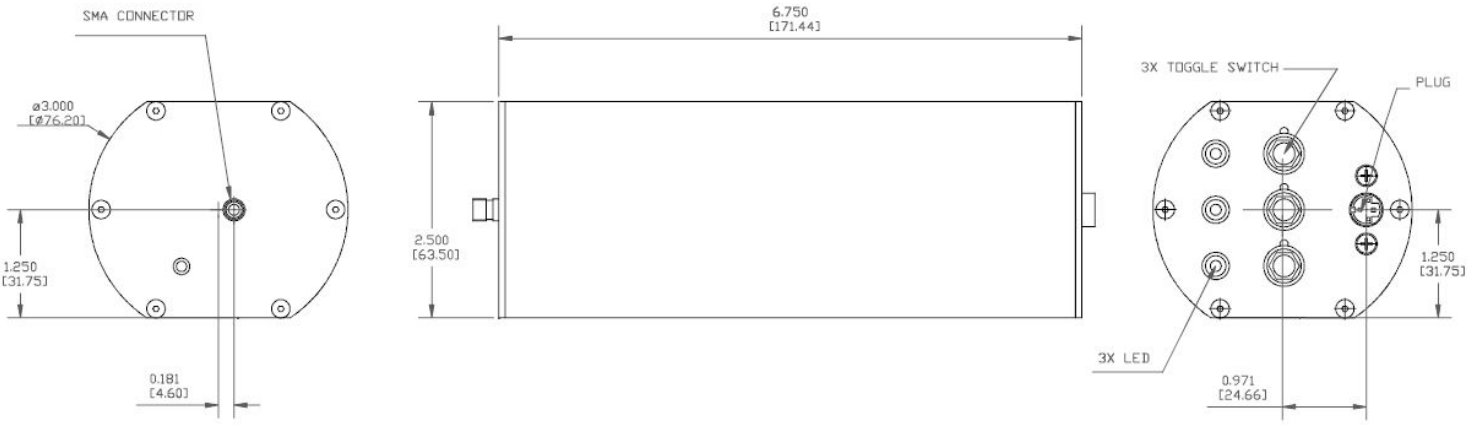
Specifications:

COMPLETE MODULE	
Spectral Output Range	200 to > 1100nm
Electrical Power Consumption	6W with Both Lamps On
Supply Voltage	12 V DC at 0.6 A
Operating Temperature	5 - 35°C
Relative Humidity	Max. 90%, Non-condensing
Warm-up Time	8 - 10 Minutes
Dimensions	6.75 x 3.0 x 2.5 inches (171.45x 76.2 x 63.5mm)
Weight	1.4 lbs (~0.63 kg)
Fiber Optic Connector	SMA905
Recommended Fiber Diameter	200 - 600 µm
DEUTERIUM LAMP (D2)	
Numerical Aperture	Approximately 0.245
Spectral Range	200 - 400 nm Without Spectral Lines
Power Consumption	About 3W
Lifetime	≥ 1000 Hours at 240nm (50% Intensity Loss)
Stability	< 1 x 10^{-3} AU
Drift	< 0.25%/h
Ignition Voltage	About 1 kV
Excitation Frequency	250 kHz
TUNGSTEN LAMP (W)	
Numerical Aperture	Approximately 0.057
Spectral Range	400 to > 1100nm
Power Consumption	Approximately 0.25W
Lifetime	>2000 Hours

Transmission / Absorption Experiment Setup:



Dimensions (Inches):



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