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B&WTEK
Your Spectroscopy Partner

Deuterium/Tungsten Light Source - BDS100

Light Source

The **BDS100** is a turnkey fiber-coupled UV/Vis/NIR light source providing spectral output from 200 to >1100nm. The 3W electrodeless 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 an 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.

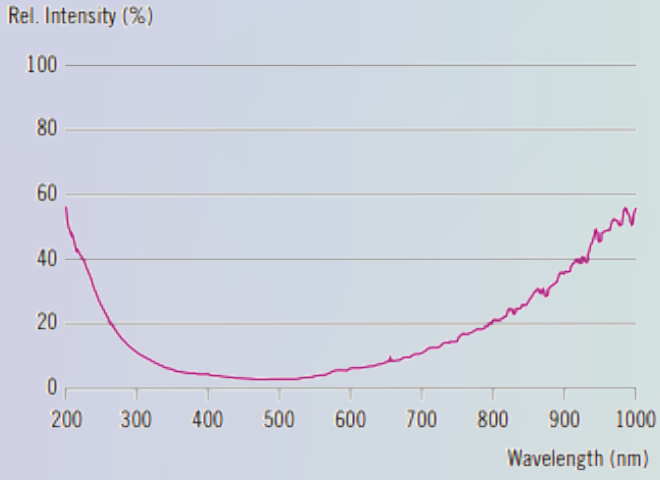
Applications:

- Transmission Experiments
- Absorption Experiments

Features:

- Fiber Coupled
- UV/ Vis/NIR Transmission Measurements
- UV/Vis/NIR Absorption Measurements
- Shutter Control
- High Stability
- Compact
- Long Life

Typical Relative Spectral Distribution



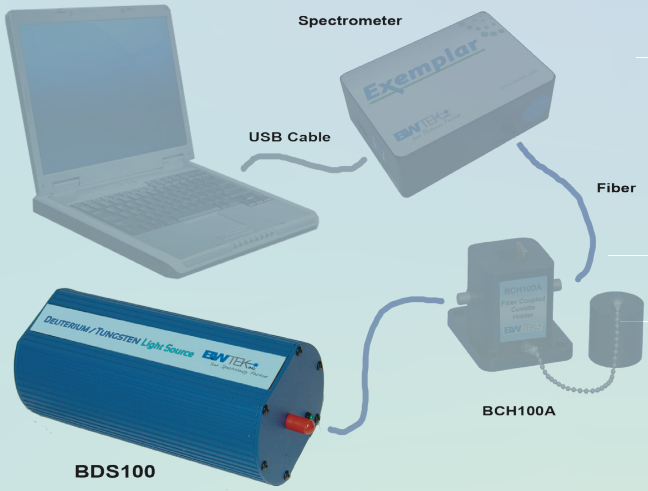
BDS100 Rear View

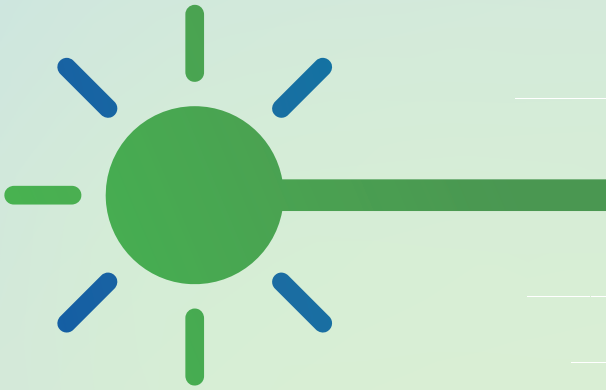
More about our **BDS100 Light Source**

Specifications:

COMPLETE MODULE	
Model No.	BDS100
Spectral Output Range	200 to > 1100 nm
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 (171.45 x 76.2 x 63.5mm)
Weight	1.4 lbs (~0.63 kg)
Fiber-Optic Connector	SMA905
Recommended Fiber Diameter	200 - 600 µm
Numerical Aperture	Approximately 0.245
DEUTERIUM LAMP (D_2)	
Spectral Range	200-400 nm: smooth spectral output 400-1100 nm: sharp spectral features expected
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 > 1100 nm
Power Consumption	Approximately 0.25W
Lifetime	>2000 Hours

Transmission / Absorption Experiment Setup:





Dimensions (Inches):