

# OL 46D

## Deuterium Lamp Power Supply

The OL 46D Deuterium Lamp Power Supply is specifically designed to operate the Optronic Laboratories OL UV-40 and OL 752-12 Deuterium Standards of Spectral Irradiance, and the OL 440-8-OH Ultraviolet Integrating Sphere Standard of Spectral Radiance. These deuterium standards must be operated at the same current used during the calibration in order to realize the calibration accuracy. Accordingly, the OL 46D provides a constant lamp current of 300 mA with a  $\pm 0.1\%$  accuracy. It is also an ideal current source for the deuterium lamp used in the OL 740-20 and OL 750-20 Source Attachments.

The OL 46D features complex automatic lamp starting and operating supplies. When the supply is turned on, a starting voltage is supplied to heat the filament. After approximately 20 seconds, the initial regulated filament voltage is reduced by 30 %, and the high voltage circuit is switched on. Following the high voltage pulse striking the lamp arc, a precision DC lamp current is established. The circuit is designed to provide a stable, reliable discharge without subjecting the lamp to undue stress. An arc status indicator on the front panel indicates operation of the lamp arc, and an elapsed time meter accumulates lamp hours only when the status indicator is lit.

The OL 46D regulated power supply maintains its accuracy during power line transients of  $\pm 10\%$ . The supply will also operate over a  $\pm 10\%$  load variance, which allows it to accommodate different operating voltages from one lamp to another.



SPECIFICATIONS	
<b>Output Current</b>	300 mA $\pm 0.1\%$
<b>Filament Voltage (Starting)</b>	10 V (1.2 A)
<b>Filament Voltage (Operating)</b>	7 V (1.0 A)
<b>High Voltage Starting Pulse</b>	600 volts (Peak)
<b>Lamp Voltage</b>	80 volts $\pm 10\%$
<b>Regulation (Line and Load)</b>	$\pm 0.05\%$
<b>Input Voltage</b>	90 – 265 VAC, 50/60 Hz
<b>Weight</b>	4 lbs (1.8 kg)
<b>Size</b>	9.88" L x 6.50" D x 3.88" H (25.1 cm x 16.5 cm x 9.9 cm)

For more information visit [OptronicLabs.com](http://OptronicLabs.com)  
or contact [Info@OptronicLabs.com](mailto:Info@OptronicLabs.com)

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As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.