OPTRONIC®
LABORATORIES

OL 752-10 and OL 752-12

Plug-In Standards Of Spectral Irradiance

Two plug-in, pre-aligned irradiance standards are available for accurately calibrating the OL 754 or OL 756 Spectroradiometer for spectral irradiance response. The "plug-in/ pre-aligned" concept eliminates tedious and time consuming set-up and alignment normally associated with spectroradiometric standards as they merely attach to the OL 754/ OL 756's integrating sphere cosine receptor. Both standards, with appropriate baffles, are mounted in pre-aligned/holder mounts. Machined, cylindrical covers are provided to protect the lamps when not in use.

OL 752-10 TUNGSTEN PLUG-IN STANDARD

The OL 752-10 can be obtained with spectral irradiance calibrations over the wavelength range of 250 to 2500 nm. It consists of a compact, 200-W tungsten-halogen lamp operating at a color temperature of about 3000 K. The short working distance of 13 cm results in irradiance levels significantly higher than that normally obtained with higher wattage standards. The combination of greater precision in optical alignment and higher irradiance levels provides for a more accurate calibration of the spectroradiometer. Calibration of the OL 752-10 is based on the NIST High-Accuracy Scale of Spectral Irradiance. The NIST Scale has a reported uncertainty that varies from ± 2% at 250 nm to ± 1% in the visible. The OL 752-10 has a transfer uncertainty relative to the NIST Scale that varies from ± 1.5% in the ultraviolet to ± 1% in the visible-near infrared.

OL 752-12 DEUTERIUM PLUG-IN STANDARD

The OL 752-12 is calibrated for spectral irradiance over the wavelength range of 200 to 400 nm It uses a stable, 40-W deuterium lamp. When mounted in the plug-in/pre-aligned housing, the working distance is 10 cm. This short working distance generates considerably higher irradiance levels than that obtained with conventional ultraviolet irradiance standards. The OL 752-12 is calibrated relative to the NIST Ultraviolet Irradiance Standard for the region below 250 nm and to the NIST High-Accuracy Scale of Spectral Irradiance for the 250 to 400 nm region. The NIST Ultraviolet Irradiance Standard has an uncertainty that varies from ± 7.5% at 200 nm to ± 5% at 250 nm. The OL 752-12 has a transfer uncertainty relative to the NIST Scales that varies from ± 3% at 200 nm to ± 1.5% at 400 nm.

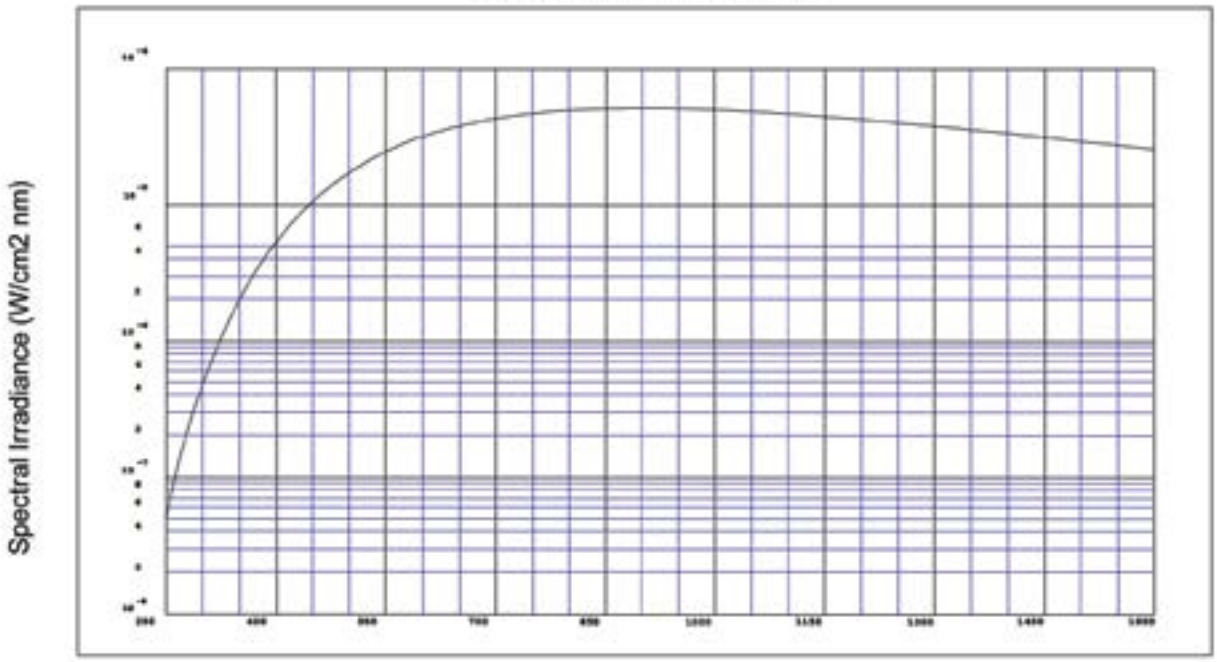
SPECIFICATIONS	
LAMP TYPE	
OL 752-10	Tungsten-Halogen *(200-W)*
OL 752-12	Deuterium *(30-W)*
OPERATING CURRENT	
OL 752-10	6.500 amps DC
OL 752-12	500 milliamps DC
LAMP TYPE	
OL 752-10	Tungsten-Halogen *(200-W)*
OL 752-12	Deuterium *(30-W)*
NOMINAL IRRADIANCE *(OL 752-10)*	
@ 250 nm	6 x 10-8 W/cm²nm
@ 550 nm	3 x 10-5 W/cm²nm
@ 1000 nm	5 x 10-5 W/cm²nm
@ 1600 nm	3 x 10-5 W/cm²nm
UNCERTAINTY *(RELATIVE TO NIST SCALE)*	
OL 752-10	1 to 1.5%
OL 752-12	1.5 to 3%
LONGTERM PHOTOMETRIC STABILITY*	
OL 752-10	≤ 0.06%/ hour
OL 752-12	≤ 0.06%/ hour
RECOMMENDED POWER SUPPLY	
OL 752-10	OL 410-200 Precision Lamp Current Source
OL 752-12	OL 46D Deuterium Lamp Source

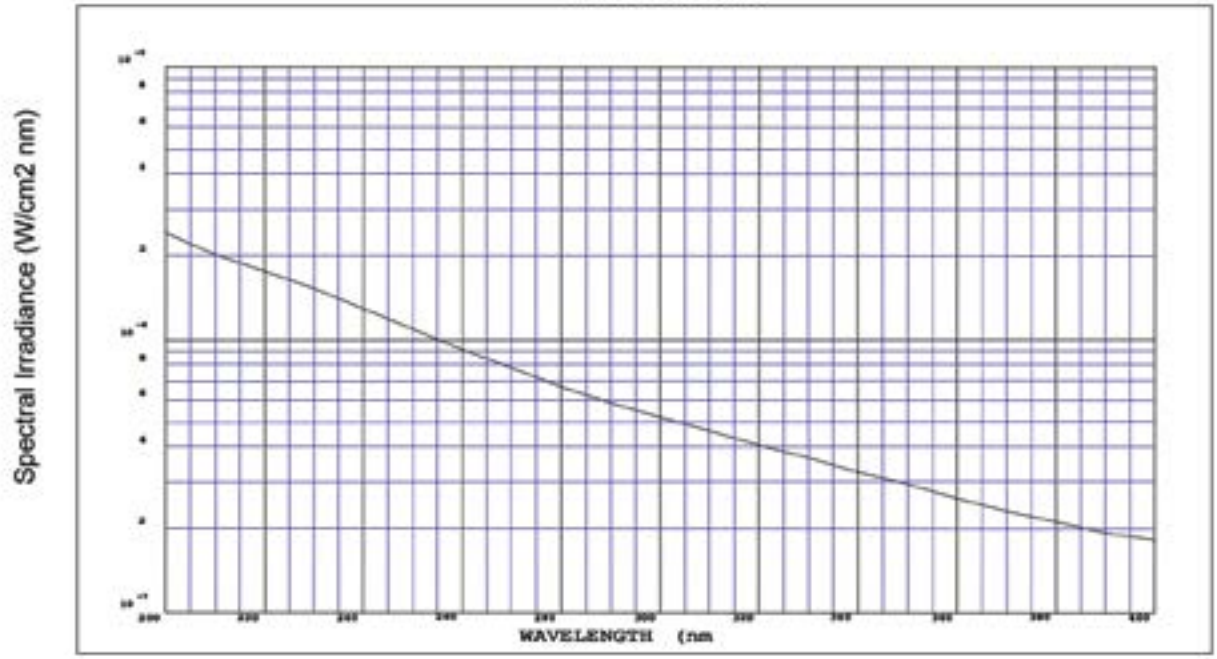
** High stability option available*

CALIBRATION OPTIONS FOR THE OL 752-10	
OL 752-10C	250 to 2500 nm
OL 752-10E	250 to 800 nm
OL 752-10F	350 to 1100 nm
OL 752-10G	800 to 1600 nm
OL 752-10J	250 to 1600 nm
OL 752-10L	250 to 1800 nm
OL 752-10M	250 to 1100 nm
OL 752-10U	Uncalibrated

NOTE: In order to ensure consistent and reliable results, Optronic Laboratories standards should only be used with current sources that possess a ramp current feature.

OL 752-10 Tungsten Plug-in Irradiance Standard
(Typical Spectral Irradiance)





OL 752-12 Deuterium Plug-In Irradiance Standard
(Typical Spectral Irradiance)

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