



FO-6000

A high color temperature tungsten light source for spectroscopy



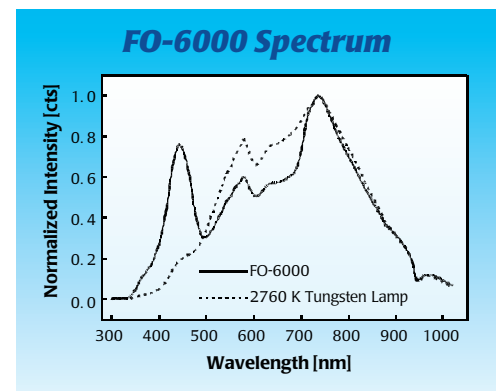
- **High light output**
- **Low drift (<0.5 mAU/h)**
- **Effective color temperature of 6000°K**
- **Compact — lightweight**
- **Low power consumption**
- **External triggering**
- **15-20 minutes warming up time**
- **Negligible heat generation**

This miniature tungsten light source has been developed for high precision portable and low-power spectroscopy applications. Its advantage lies in its high light power output, its effective color temperature of 6000°K and its exceptionally low drift below 0.5 mAU/h. The **FO-6000** is a light source for the extended visible part of the light spectrum

(380 nm – 1100 nm). It has an SMA type output connector. Shutter and lamp can be operated via TTL external triggering. This light source offers a wide assortment of field applications in analytical chemistry, as well as environmental and life science.

A significant problem with tungsten light bulbs is their inherent low light output at wavelengths below 430 nm. The **FO-6000** was developed to overcome this limitation.

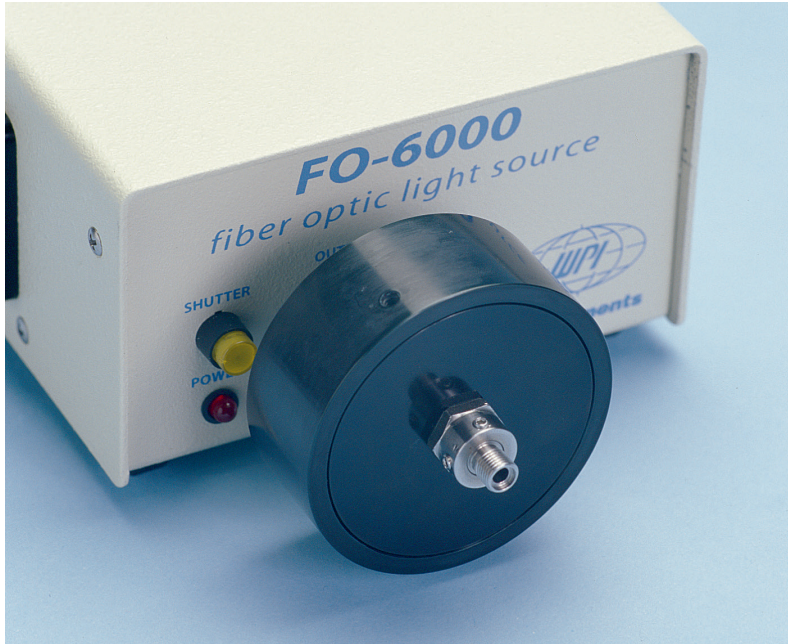
The light intensity of a tungsten light bulb (2760°K) drops below 10% at 420 nm wavelength. However, using **FO-6000**, the light intensity drops below 10% at 370 nm, where the intensity of the conventional tungsten light bulb is at approx. 2% relative light output. The inherent low noise of the **FO-6000** makes it particularly suitable for low-noise detection systems.



Relative intensities of FO-6000's light output and a 2760°K tungsten light bulb (uncorrected intensity output of WPI's TIDAS II spectrophotometer).

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The FO-6000-FILT inline filter holder directly attaches to the light source, allowing a virtual light loss-free insertion of optical fibers with outer diameters of 8-25.4mm.

FO-6000-FILT

The FO-6000-FILT inline filter holder directly attaches to the FO-6000 light source. This allows a virtual light loss free insertion of optical filters with outer diameters from 8 to 25.4 mm and thickness ranging from 2 to 10 mm into the light path of the FO-6000. With this filter holder and an optical filter, a highly stable monochromatic light source can be assembled.

SPECIFICATIONS

SPECTRAL RANGE.....	380 – 1100 nm
EQUIVALENT COLOR TEMPERATURE.....	6000°K
DRIFT	<0.5 mAU/h (380nm to 800 nm)
INPUT REQUIREMENTS.....	12Vdc regulated, 1000 mA
SHUTTER	for Zero-adjustments
FUNCTIONS.....	Lamp + shutter can be triggered separately by a TTL signal
FIBERS.....	up to 600 µm core diameter
POWER CONSUMPTION	approx. 6 Watt
LIFETIME.....	3000 – 10000 hours dependent on internal power settings
AMBIENT TEMPERATURE RANGE.....	15°C to 35°C
DIMENSIONS	190 x 120 x 70 mm
WEIGHT (w/o power supply).....	600 g



WORLD PRECISION INSTRUMENTS

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