



# FO-6000™

*A high color temperature tungsten light source for spectroscopy*



www.wpiinc.com

This new 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 a 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.

**FO-6000's** main features are

- 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

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 a **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.

## 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

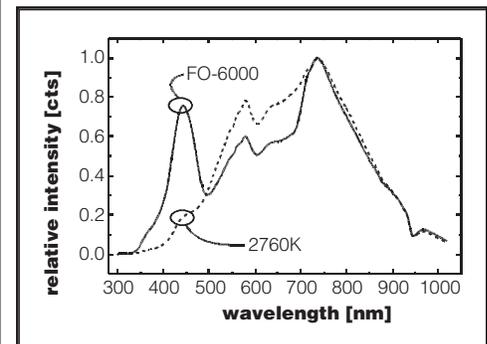
15°C to 35°C

### Dimensions

190 x 120 x 70 mm

### Weight (w/o power supply)

600 g



**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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