

Element Light Source (Deuterium Lamp or Halogen Lamp)

ATG1001

Features

- Deep Ultraviolet Spectrum: Coverage range from 190–400 nm.
- Halogen Light Source: 350–2500 nm.
- Outstanding Performance: Ultra-stable light output with peak-to-peak stability of less than 0.005%.
- Fiber Optic or Free-Space Output: The ATG1001 supports free-space or fiber optic output (SMA905 interface), making it easy to connect with spectrometers, optical fibers, and other measurement accessories.
- Long Lifespan: The ATG1001 features a deuterium lamp bulb with a service life of 1000 hours, which can be easily replaced.
- Optical Fiber: It is recommended to use anti-ultraviolet quartz optical fibers produced by Optosky.

Applications

- UV Flue Gas Analyzer
- Scientific Research Laboratory
- Water Quality Analysis
- Environmental Monitoring Instrumentation

Description

Optosky's ATG1001 Elemental Light Source utilizes deuterium lamps from Hamamatsu of Japan or halogen light sources from Osram. It is capable of producing a stable broad-spectrum output covering 190–400 nm or 350–2500 nm. With a peak-to-peak stability of less than 0.005% and a drift of only $\pm 0.5\%$ per hour, it boasts features such as a long service life, minimal attenuation, and high output power. This makes it widely suitable for traditional benchtop spectrometers as well as portable miniature spectrometers for field applications. The ATG1001 elemental light source offers high stability, making it particularly ideal for absorbance measurements. It can be equipped with a cuvette holder for direct transmission and absorption testing of cuvettes or optical filters.

Model	Descrip
ATG1001-DL	Deuterium Lamp, 190–400nm
ATG1001-HL	Halogen Lamp, 350-2500nm

* The ATG1001 and ATG1020 are identical in size.

Model	Feature
ATG1020-H	Deuterium-Halogen Combination Lamp, High-Cost-Performance Broadband Light Source
ATG1020-N655	The deuterium-halogen combination lamp features a broad spectrum, eliminating the 655nm spike.
ATG1020-Pro	The halogen lamp power is adjustable, facilitating the regulation of relative ultraviolet light intensity; The spectral intensity is optimized for a flatter profile, making it more suitable for applications such as reflectance and transmittance spectroscopy; Built-in aperture for easy dark current testing; Eliminates the 655nm spike.



1. Parameter

	ATG1020H	ATG1020-N655	ATG1020-Pro	ATG1001-DL	ATG1001-HL
Wavelength Range	190-2500 nm (Deep UV Deuterium Lamp)			190-400nm	350-2500nm
Power Stability	<0.005% at 250 nm				
Drift	+/-0.5% per hour at 250 nm				
Deuterium Lamp Power	20 W				/
Bulb Lifetime	3000 H				/
Halogen-Tungsten Lamp Power	5 W			/	5W、20W
Bulb Lifetime	5000H				5000H
Halogen-Tungsten Lamp Power Adjustment Function	No	No	Yes	No	No
Waveform Optimization Function	No	No	Yes	No	No
Built-in Aperture	No	No	Yes	No	No
Warm-up Time	15Min				
Operating Temperature	-10 ℃ - 40 ℃				
Humidity	5-95% Non-condensing				
Optical Output	SMA905 Standard Fiber Optic Interface				
Voltage and Power	85-264 V, 50/60 Hz; 60±40 W				
Dimensions (H)	80 mm x 175 mm x 140 mm				
Weight	3±0.5 kg (excluding power cord)				

2. Accessories

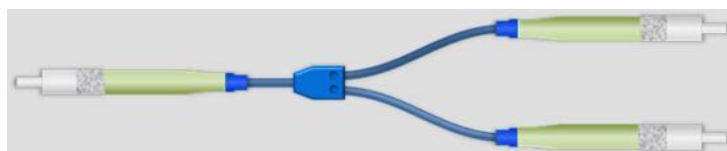


Figure 2. Customized anti-UV radiation high-transmittance fiber optic cable (total length: 1.5 m)



Figure 3. Fiber optic collimator

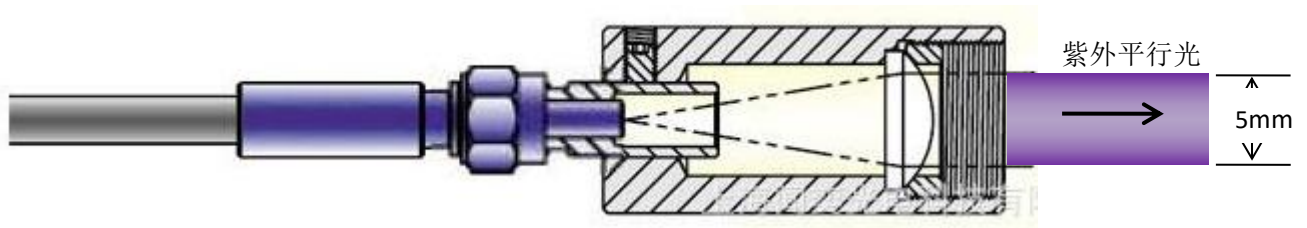


Figure 4. Fiber optic collimator

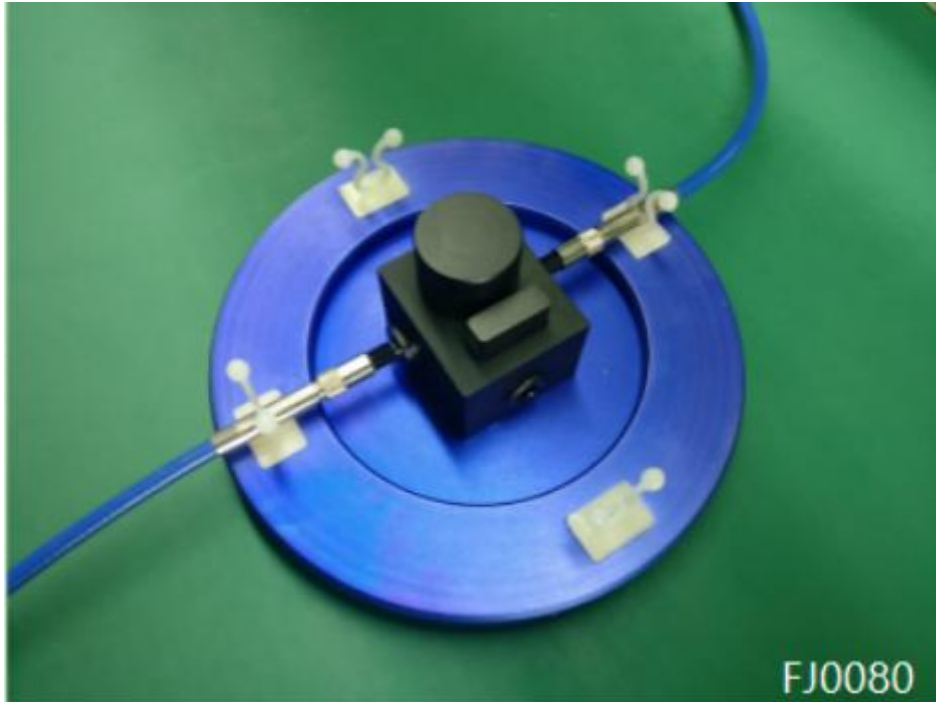


Figure 5. FJ0080 model rotary disk sample cell for spectral analysis

3. Measured Spectrum

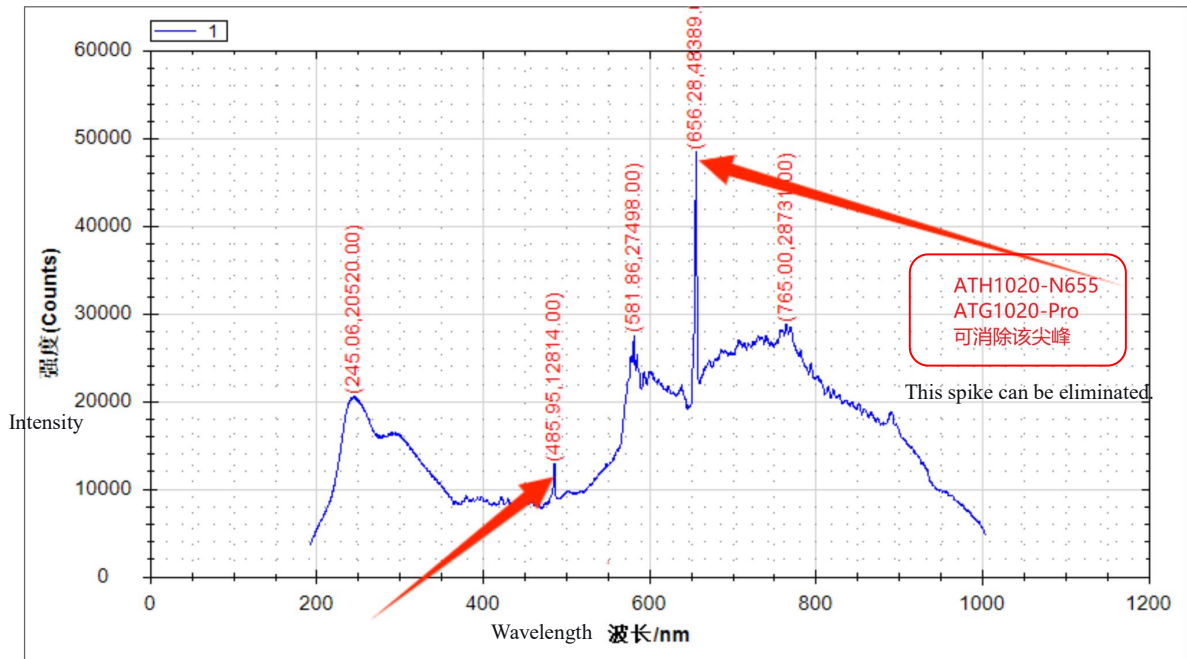


Figure 1. Measured Spectrum of the ATG1020H

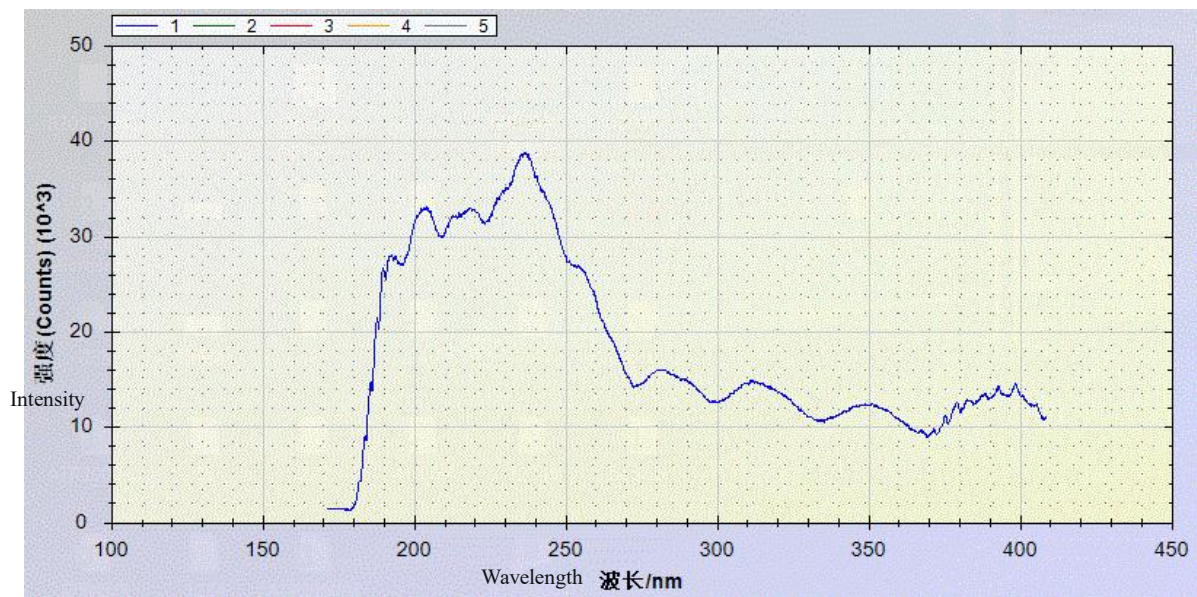


Figure 2. Output Spectrum of the ATG1001-DL (180-400 nm Range)