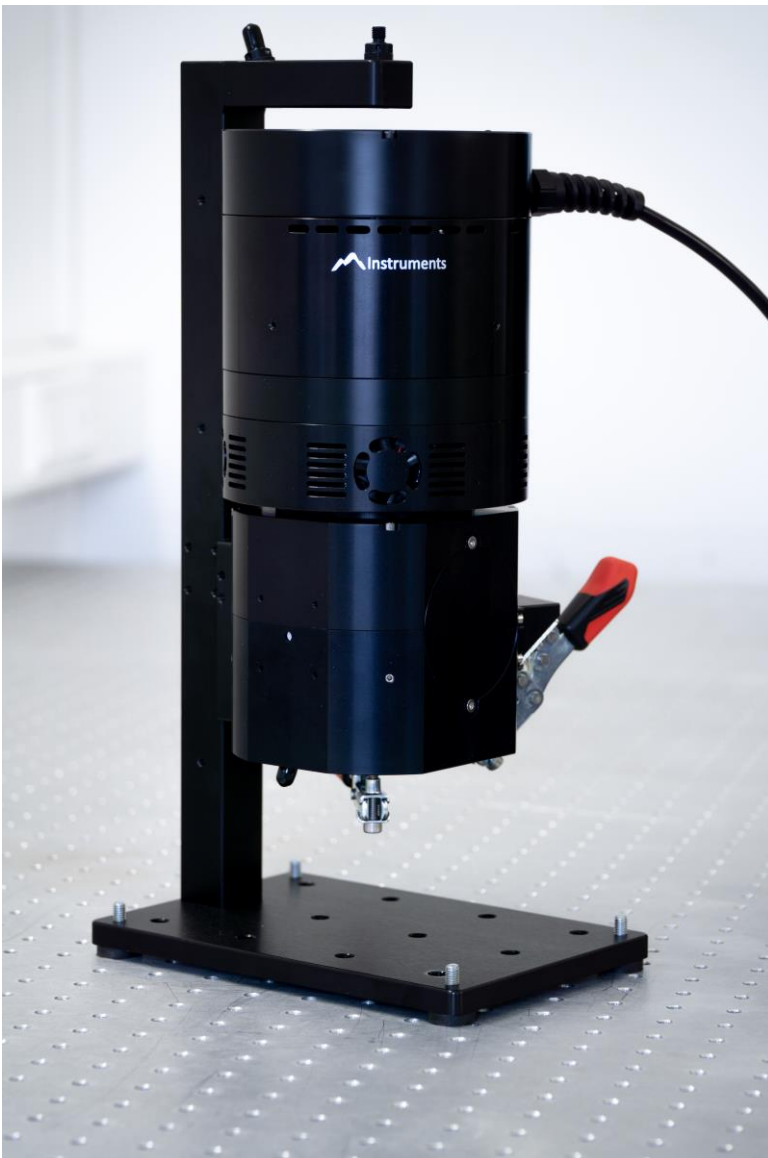


MountainSource-100-P



This calibration light source consists of four halogen illuminators that shine into a 100 mm integrating sphere that is integrated into the light source. Using the 10 mm port adapter, the light source can be docked to the 10 mm port size of the MountainSphere-50-P-Irradiance in a light-tight manner via a bayonet lock. Alternatively, a 20 mm port adapter can be used to dock to the MountainSphere-100-P-Irradiance with a 20 mm port diameter.

The integrating sphere of the calibration light source generates, to a good approximation, a Lambertian beam profile with constant radiance, resulting in a maximally homogeneous irradiance of approximately 300 nm to 2500 nm on the input port of the measuring integrating sphere used.

Key Features

- Absolutely calibrated for spectral irradiance
- Constant power & constant current mode
- 350 – 1050 nm wavelength range
- Several power levels
- Calibration points adjustable to used spectrometer
- Internal integrating sphere
- Lambertian radiator

This irradiance is factory calibrated against a NIST-traceable standard from 300 nm to 1100 nm absolute, with wavelength steps matched to the spectrometer in use. The light source can be operated in either constant current or constant power mode, with the current or power being adjustable via supplied software. The calibration data of the spectral irradiance can be ordered for different current or power levels.

For absolute calibration, the MountainSource-100-P light source is docked to the MountainSphere-50-P-Irradiance being used and allowed to warm up for approximately 30 minutes at the selected constant current or constant power. The optical setup must then be used to measure the raw spectrum of irradiance. Finally, the calibration curve of the measurement system is calculated from the quotient of the absolute irradiance data of the calibration light source and the measured counts of the raw spectrum. The calibration light source can then be removed. The MountainSphere-50-P Irradiance is now ready to measure any light source. To measure the spectral irradiance, simply multiply the measured raw spectrum by the calibration curve.



Technical data:

Material	Aluminium
Coating	PTFE
Innerdiameter	100 mm
Port diameter	10 mm or 20 mm (exchangeable)
Lamps	4x tungsten halogen 10 W (40 W total)
Power supply	Internal constant current source
Calibration	Spectral irradiance [$\mu\text{W}/(\text{cm}^2 \text{ nm})$]

About us

Mountain Instruments is a brand of Mountain Photonics GmbH. We aim at adding value to our customers by offering technical service, product development and in-house products.