

BPI-SF1

Sun Simulator Isotype Cell Sensor

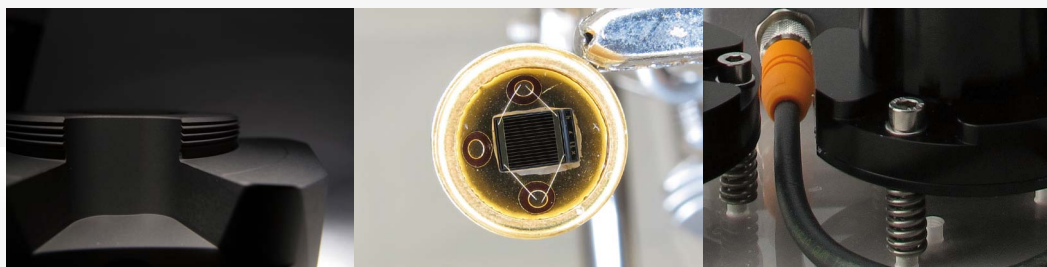


Black Photon
Instruments

Technical Specification

SF1

- Current matched set of isotype cells:
 - GIP ($\text{Ga}_{0.5}\text{In}_{0.5}\text{P}$) channel spectral range: 340 - 700 nm
 - GaAs ($\text{Ga}_{0.99}\text{In}_{0.01}\text{As}$) channel spectral range: 700 - 900 nm
- Optional NIR/SWIR detection:
 - Germanium isotype cell: Spectral range 900 - 1750 nm
- All cells sealed in hermetic glass/metal enclosure with nitrogen atmosphere
- Anodized aluminum sensor carrier with easy to clean cover
- Opening angle of sensors: $\pm 25^\circ$
- Collimator tubes for DNI measurements with slope angle $\pm 2.5^\circ$, opening angle $\pm 2.75^\circ$, stop angle $\pm 3^\circ$
- Black Photon instruments custom plasma coating for highest straylight rejection along the entire solar spectrum
- Sensors pre-calibrated under AM1.5d ASTM G173 spectrum at 1000 W/m²
- Fraunhofer ISE Calibration Certificate optional
- Built in resistor shunts: +/-0.1 % accuracy resistors with 10 ppm/K thermal coefficient
- Build in shunt resistors: Top 50 Ohm / Mid 50 Ohm / Bot 10 Ohm
- Temperature measurement: PT100 Sensor integrated
- Electrical connection: 3xM12 connectors with 1.5 m cable
- Electrical connection box for joining all signals in one cable optional
- Grounding: The sensor housing and all cables are shielded and can be connected to protective earth (PE) or signal ground
- Mounting with three individually adjustable spring loaded bearings on every sensor.
- Optics interface: Each sensor housing has a M47x1.0 custom interface and a 1"-1/32 c-mount standard optics interface. The c-mount is compatible with a large number of suppliers of optical parts out of the catalog, e.g. optical filters, baffles or custom collimators
- 1 year extended warranty against all measurable degradation



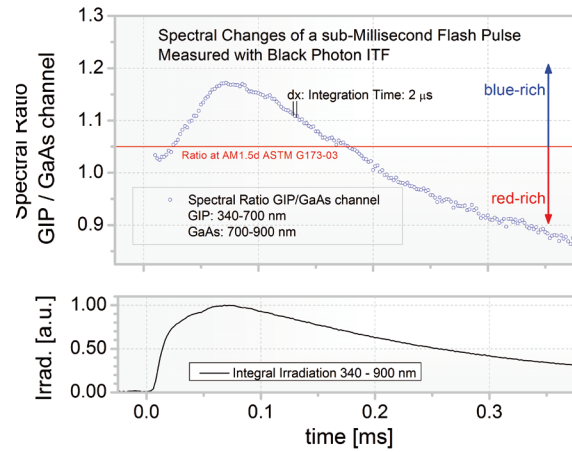
Specification Version 2.15

About Black Photon Instruments GmbH:

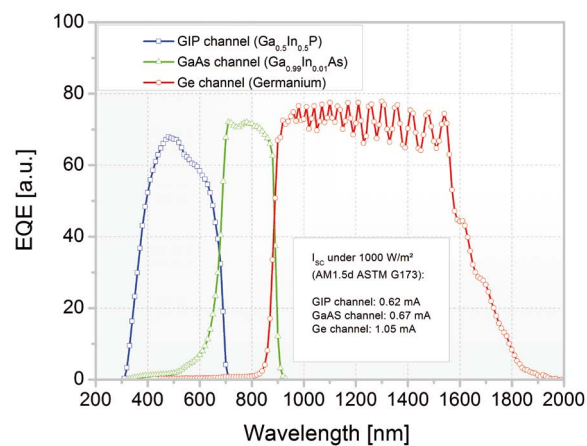
Black Photon Instruments is a Freiburg (Germany) based company which offers new ways for solar radiation measurements. Our technology is developed in close cooperation with the Fraunhofer Institute for Solar Energy Systems (ISE) in Freiburg and other leading research institutes.



Example Measurement



External Quantum Efficiencies



Dimensions for one channel (in mm)

