819-IG-06-WL - REV 01 - 14/JAN/2026

User Notes

819-IG-06-WL

Optical Power and Wavelength Measurement Sensor

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Thank you for your purchase of our Newport product! Please see important information about your instrument and how to get started using your new 819-IG-06-WL optical power and wavelength measurement sensor. For more detailed information on this sensor's usage with the 1938-R / 2938-R series of optical meters (sold separately), please refer to the user manual included on the USB drive with your instrument, as well as online at Newport.com (type in your model number into the search bar to direct you to the respective product page).

Handling Precautions

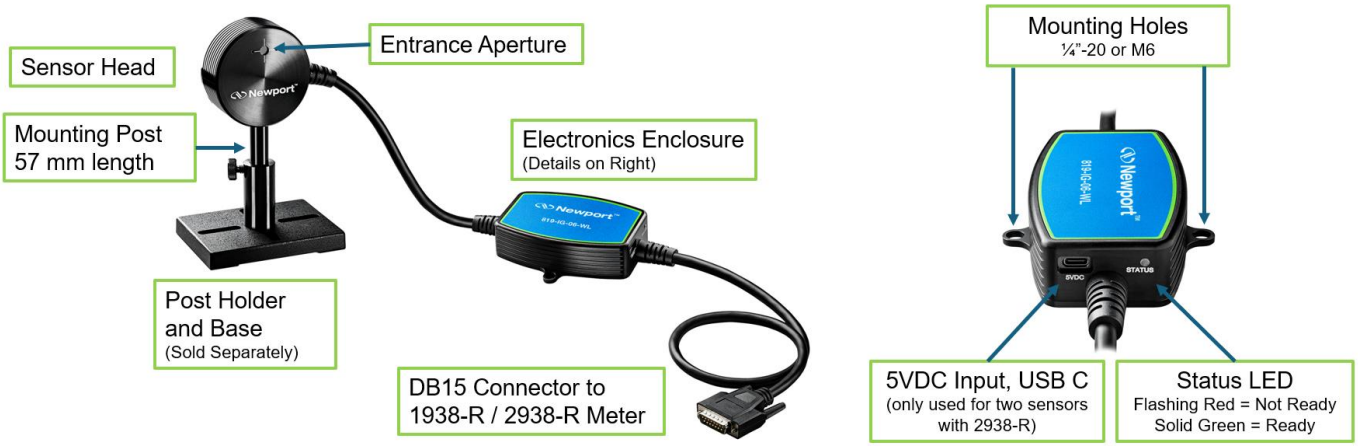
Whenever handling this instrument, make sure to follow these precautions:

- Follow general precautions for handling static sensitive devices.
- Adhere to good laser safety practices when using this equipment.
- Do not attempt to operate this equipment if there is evidence of shipping damage or there is suspicion that the equipment will not operate correctly.
- There are no user-serviceable parts inside the 819-IG-06-WL sensor.
- When not in use, cover the entrance aperture with the supplied port plug or store face down to avoid dust and contamination from entering the aperture into the integrating sphere.
- Refer to the below selected specifications, for proper function and to avoid damage to the instrument.
- Please review the 1938-R / 2938-R user manual for a complete list of precautions and warnings.

Product Specifications (selected)

Newport Meter Compatibility	**1938-R, 2938-R**
Input range, Power	**300 nW – 1 W; -35dBm – +30dBm**
Input range, Wavelength	**950 – 1650 nm**
Damage Threshold	**1 kW/cm^2 on integrating sphere surface**
Operating Temperature	**+15°C – +30°C**
Storage Temperature	**-10°C – +50°C**
Stabilization Time @ Start up	**10 minutes**
Weight	**0.63 kg (1.39 lbs.)**
Dimensions (Sensor Head)	**Φ68.6 X 30.1 mm**
Entrance Aperture	**6 mm**

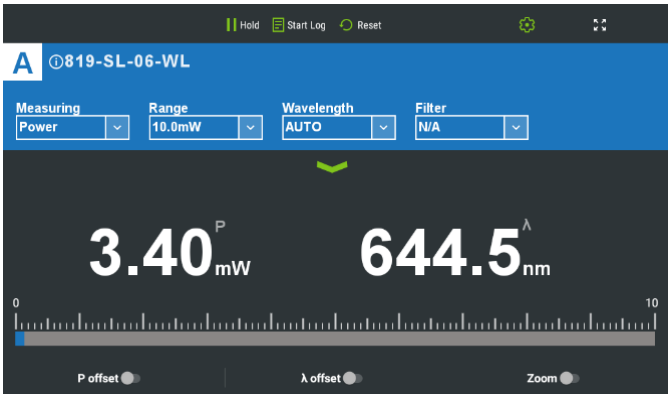
819-IG-06-WL Product Overview



General Operation

- Attach the mounting post to the bottom of the sensor head, with a 1/4"-20 screw (included), and secure it using a Newport post holder and base (sold separately). Secure the post holder to the working area with screws or a magnetic mount.
- It is highly recommended to secure the electronics enclosure with the supplied mounting holes, to minimize stress or movement of the sensor head.
- Connect the DB15 connector to the rear panel Channel A or Channel B input on the 1938-R or 2938-R meter. The meter powers the sensor and will automatically start measuring optical power and wavelength. Detailed instructions on settings, data-logging, etc. are available in the 1938-R / 2938-R user manual.
- When using a single 819-IG-06-WL with a 1938-R or 2938-R meter, the meter powers the sensor, and thus the 5VDC input is not required. When using two 819-IG-06-WL sensors with a 2938-R dual channel meter, one of the sensors needs to be powered via an external power supply, via the 5VDC input port.
  The power supply has two parts:
  a. USB C style input, with a 5 VDC, 2.1 A supply requirement, (PN 819-WL-PS)
  b. Cable USB A to USB B M/M black 1.5m, (PN 819-WL-PS-CBL)
- Ambient operating temperature range is +15°C to +30°C. The detector inside the sensor head is temperature stabilized via a Thermoelectric Cooler (TEC) for optimum accuracy. Allow 10 minutes for the sensor to warm up and achieve stable temperature before measurements are taken. When the temperature inside the sensor is not stable, the Status LED on the electronics enclosure will flash red. The user should try to avoid rapid changes in the ambient temperature for the best performance.
- The Status LED will be solid green to indicate the sensor temperature is stable and working properly.
- Ideally, a free space laser beam directed into the entrance aperture should be collimated, centered, and perpendicular to the aperture face. Diverging / converging beams can be used with additional considerations, contact your Newport sales representative for more application specific support. To use fiber coupled optics, please see the accessories section below for more information.

1938-R and 2938-R Optical Meter Display Features

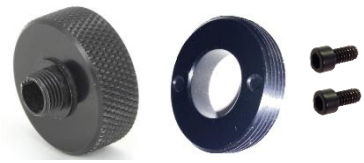


For more information on the features and functions on the 1938-R and 2938-R meters (sold separately), please refer to the respective user manual, which include selecting the power range, units selection (W, dBm, nm, cm^{-1}), data logging, ambient light and wavelength offset, averaging, and more.

Fiber Coupled Optics Accessories

By utilizing the two mounting holes on either side of the entrance aperture (highlighted in green below), additional fiber coupled optics accessories (sold separately) can be mounted for optimized coupling into the aperture. Please refer to the below list, more information can be found on our Newport.com website.

AO271 – FC Fiber Adapter Kit*



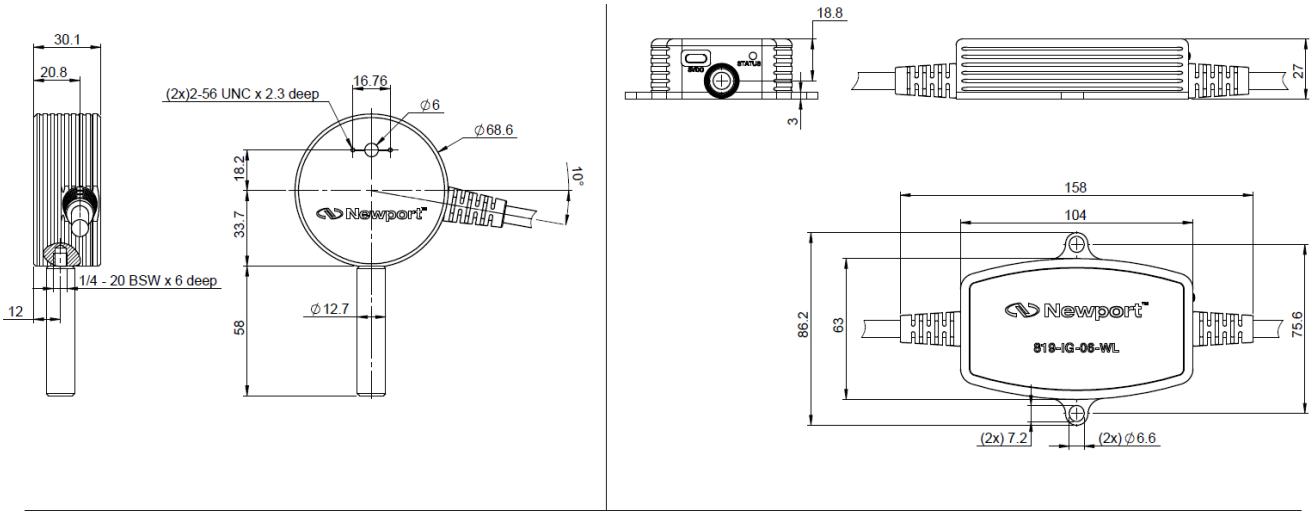
AO122 – Bare Fiber Adapter Kit
(requires BF820 Bare Fiber Holder)

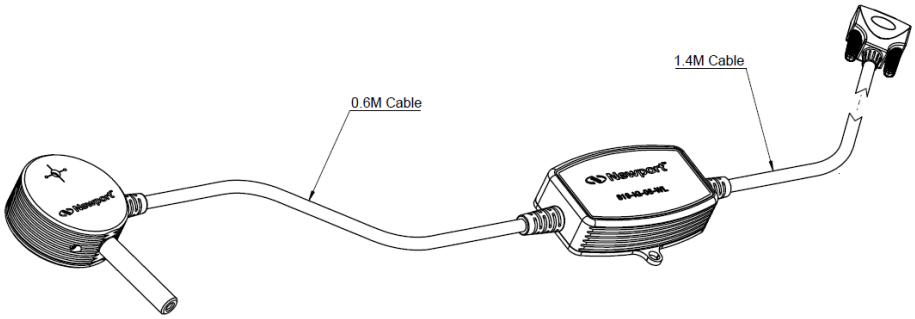
BF820 – Bare Fiber Holder
(requires AO122 Adapter Kit)

BF820 and AO122 pictured together for bare fiber coupled experiments

*Power measurement results while using the AO271 will vary. Expect up to ±3% power accuracy variation compared to free-space measurements due to the port effect.

Dimensional Drawings (in mm)





Contacting Newport

To obtain information regarding sales, technical support or factory service, United States and Canadian customers should contact Newport directly.

Telephone: 877-835-9620 (toll-free in United States)
800-222-6440
Sales and Technical Assistance: salesirv@mksinst.com

Customers outside of the United States must contact their regional representative for all sales, technical support, and service inquiries. A list of worldwide representatives can be found on Newport's website: https://www.newport.com/contact/contactslocations.

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