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Find the *Newport 818-ST* at our website: *Click HERE*

UV/Si Detectors, Wand



818-ST-UV/DB

- **Highly protective and rugged aluminum housing (818-ST-UV model)**
- **Power levels from pW to 2W with sliding OD3 filter**
- **Wavelengths from 200 - 1,100 nm (818-ST-UV model)**
- **Detachable DB15 calibration module**
- **EMI/RFI Shielded**

The 818-ST and 818-ST-UV UV/Si detectors put all the performance of the popular 818 Series Si and UV-enhanced Si detector into a narrow-profile, hand-held wand. Incorporating a large 10 mm X 10 mm Si photodiode, these slim detectors are ideal for measurements in tight locations with busy setups. It provides a built-in calibrated OD3 attenuator at the flick of a switch. The UV detector is packaged in aluminum housing to avoid burning of plastic housing (resulting in potential damages on optics in the setup) especially in the UV wavelength range. The calibration module is detachable from the BNC connector, allowing interfacing with Newport meters, an oscilloscope, or a current meter as well. For more UV and Si photodiode detector options, page 1156 and page 1159. Thermopile (see page 1162) and pyro (see page 1167) sensors are also sensitive in UV wavelengths.

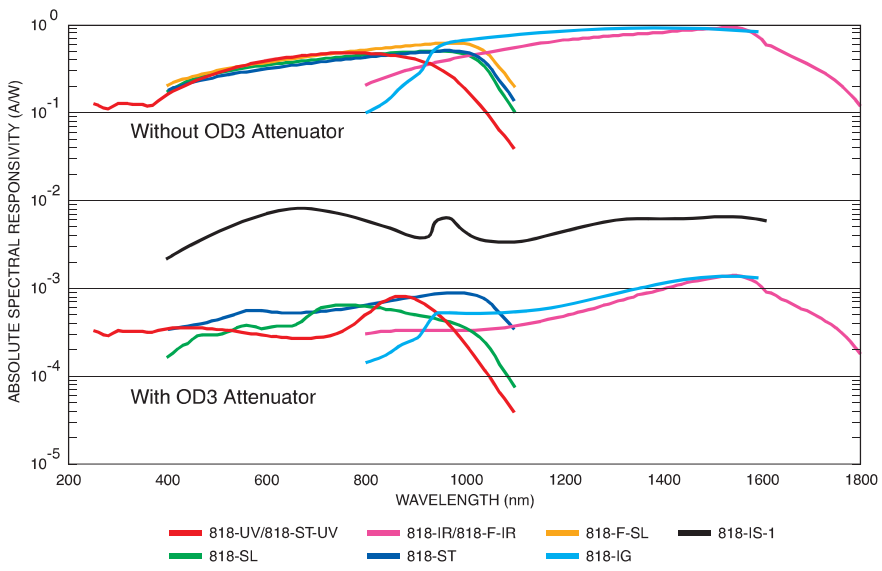
All detectors are supplied with a NIST traceable calibration report that details individual detector responsivity measured with and without attenuator. The standard BNC connector allows flexible interfacing with oscilloscopes, lock-in amplifiers or current meters. The model indicated by the /DB suffix come with an additional BNC/DB15 calibration module that provides direct compatibility with Newport power meters, including 1916-C, 842-PE, 1918-C, 1928-C, and 1936/2936-C. The /CM suffixed models come with an additional BNC/8-pin mini-DIN calibration module that provides compatibility with legacy Newport power meters. In both cases, the /CM and /DB adapters contain also the detector calibration data, model number, serial number and calibration date for seamless operation with the power meter. For more details about detector compatibility, see page 1148.

Specifications

Model (w/ DB15 Connector)	818-ST-UV(/DB)	818-ST (/DB)
Spectral Range (nm)	200 to 1100	400 to 1100
Power Density, Average Max w/ Attenuator (W/cm²)	0.2	2
Power Density, Average Maximum w/o Attenuator (mW/cm²)	0.2	2
Pulse Energy, Maximum - w/ Attenuator (µJ/cm²)	0.1	1
Pulse Energy, Maximum - w/o Attenuator (nJ/cm²)	0.1	1
Uniformity (%)[1]	±2	
Linearity (%)	±0.5	
Rise Time (µs)	3	
Shunt Resistance (MΩ) (typ)	200	
Reverse Bias, Maximum (V)	5	
NEP (pW/ÃHz)	0.018	0.015
Material	Silicon (UV Enhanced)	Silicon
Active Area (cm²)	1	
Shape	Wand	
Attenuator, OD3	Built-In	

[1]When measured with beam centered and filling 80% of active area.

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Typical spectral responsivity of Newport's low power detectors



818-ST (/CM comes with an 8-pin DIN calibration module, and /DB comes with a DB15 calibration module)

Highest Quality Photodiodes Are Used in Newport Semiconductor Detectors

Newport uses the highest quality semiconductor detector materials available in our 818 Series Low-Power Detectors. In addition, each detector arrives with a complete full-spectrum calibration report detailing detector responsivity in 10 nm increments. Newport's advanced in-house calibration facility performs the tightest calibrations in the business, further improving the absolute accuracy of our detectors. For more information, refer to Detector Calibration Services.

Low NEP (Noise Equivalent Power) with a Wide Dynamic Range

Exclusive OD3 attenuator technology extends the calibrated optical dynamic range of our Cylindrical and Hand-Held Wand Detectors by three decades. Our patented attenuator design provides low reflection, high damage threshold and spectral flatness, without the damage susceptibility problems of thin-film attenuators or the spectral variance of simple volume-absorbing attenuators. With the low NEP associated with the photodiodes Newport is using, a wider dynamic range is achieved.

Detachable Calibration Modules for Calibrated Power Readings

Calibration modules are required when using the 818 Series Low Power Detectors with Newport's power meters in calibrated power reading. The module is matched to an individual detector and provides the meter with detector calibration and operating information. The calibration module option is indicated by the /CM or /DB suffix in the detector Model number.

Rugged Aluminum Housing for 818-ST-UV(/DB) Optical Sensors

High power laser beam, especially in the short UV wavelength range, is highly absorbed by plastic material, in which most other wand detectors are packaged. This can potentially result in evaporation of the material and with the UV wavelength optical coating can easily be damaged. Newport's 818-ST-UV optical detector is designed in aluminum housing to address this issue, and to make it workable in more challenging environments.

Ordering Information

Model	Description
818-ST-UV	UV Wand Detector, UV-Silicon, 200–1100 nm, OD3 Attenuator, BNC Connector
818-ST-UV/DB	UV Wand Detector, UV-Silicon, 200–1100 nm, OD3, DB15 Calibration Module
818-ST	Si Wand Detector 400–1100 nm, OD3 Attenuator, BNC Connector
818-ST/DB	Si Wand Detector, 400–1100 nm, OD3 Attenuator, DB15 Calibration Module
818-ST-UV/CM	UV Wand Detector, UV-Silicon, 200–1100 nm, OD3, 8-pin Calibration Module
818-ST/CM	Si Wand Detector, 400–1100 nm, OD3 Attenuator, 8-pin Calibration Module

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