

DSS-LT020

Lithium Tantalate Solid State Detector

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

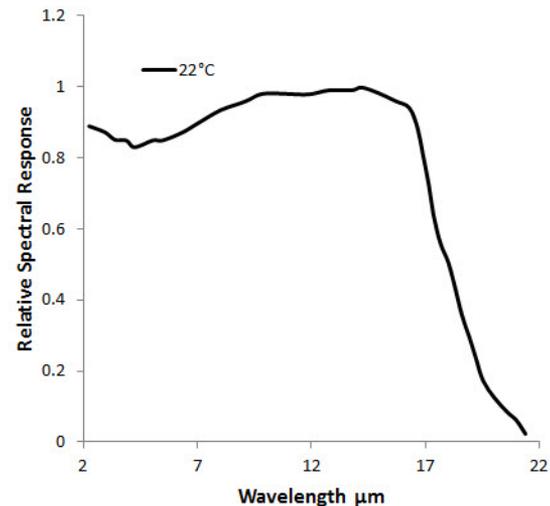
The lithium tantalate pyroelectric detector provides good spectral response in the mid-IR.

If you need a single point detector to measure signals in the mid-IR spectral region, the solid state InSb detector HORIBA Scientific is an excellent choice. With high sensitivity (D^*) and thermoelectric cooling, responsivity extends from 1000 nm to 5500 nm. This is one of a number of single point detectors available from HORIBA Scientific. Contact us for further information.

Used in conjunction with optically optimized housings, these detectors integrate seamlessly with HORIBA's extensive selection of monochromators. In addition, the SpectrAcq2 acquisition module allows for software integration with LabSpec, SynerJY, or LabVIEW. With all of the additional optical adapters available from HORIBA, a user can easily go from individual components to a complete spectroscopy solution.

Features and Benefits

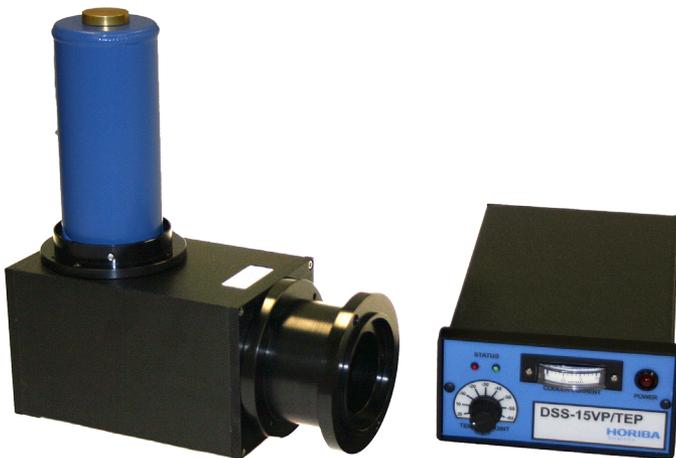
- Wide spectral responsivity from 2 μm to 16 μm
- High sensitivity ($D^* \sim 10^9$)
- Compact ambient detector housing



Accessories

Various accessories are available for powering the detectors, optically coupling detectors to HORIBA monochromators, and data acquisition.

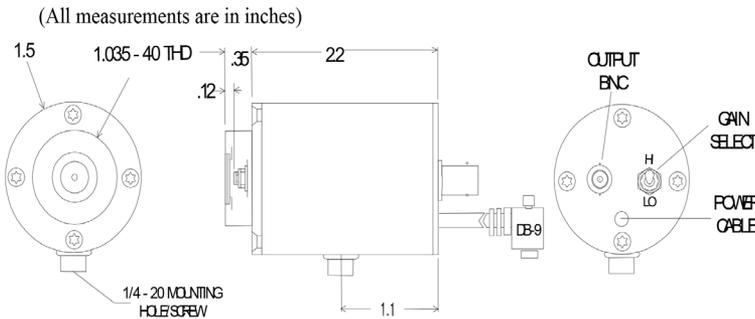
- Power supply for ambient detectors, DSS-15VP
- Mirror-based housing, 1427C
- BNC cable, J30646
- SpectrAcq2 data acquisition module
- SMA fiber adapter, DSS-SMA
- Dual 1427C housing adapter, J23078370
- Dual detector housing, J23079050
- BNC switchbox for dual detectors, SWB-AB



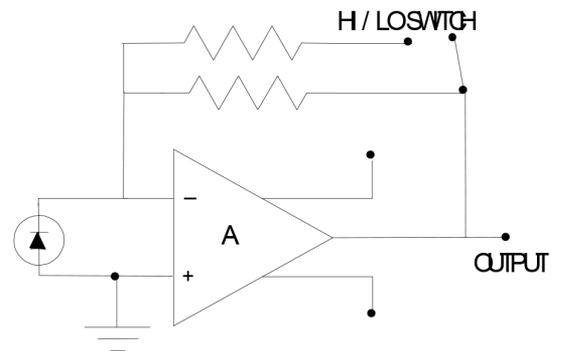
Specifications

Part number	DSS-LT020A
Detector type	2.0 mm diameter lithium tantalite pyroelectric
Operating temperature (°C)	22°C ambient
Operating wavelength (µm)	2.0 – 16 µm
Responsivity (V/W @ peak)	10 ⁵ / 10 ⁴
Noise (V/Hz^{1/2})	100 x 10 ⁻⁶ / 10 ⁻⁷
NEP pk, (W/Hz^{1/2})	< 1 x 10 ⁻⁹
Detectivity (D*)	1.77 x 10 ⁹
Bandwidth (-3dB – Hz, typical)	1 – 100 Hz
Power requirements	± 9 VDC to ± 15 VDC
Connections	BNC signal output. Shielded power cable terminated with a DB-9 connector directly couples the unit with the PS/TC-1 Low Noise Power Supply / Controller.

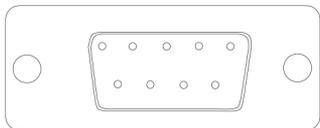
Mechanical Dimensions



Electrical Diagram



DB-9 Pin Out Diagram



- | | |
|---------------|-------------|
| 1. No connect | 6. +V |
| 2. No connect | 7. -V |
| 3. No connect | 8. GND |
| 4. No connect | 9. Case GND |
| 5. No connect | |



OPTICAL BUILDING BLOCKS



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