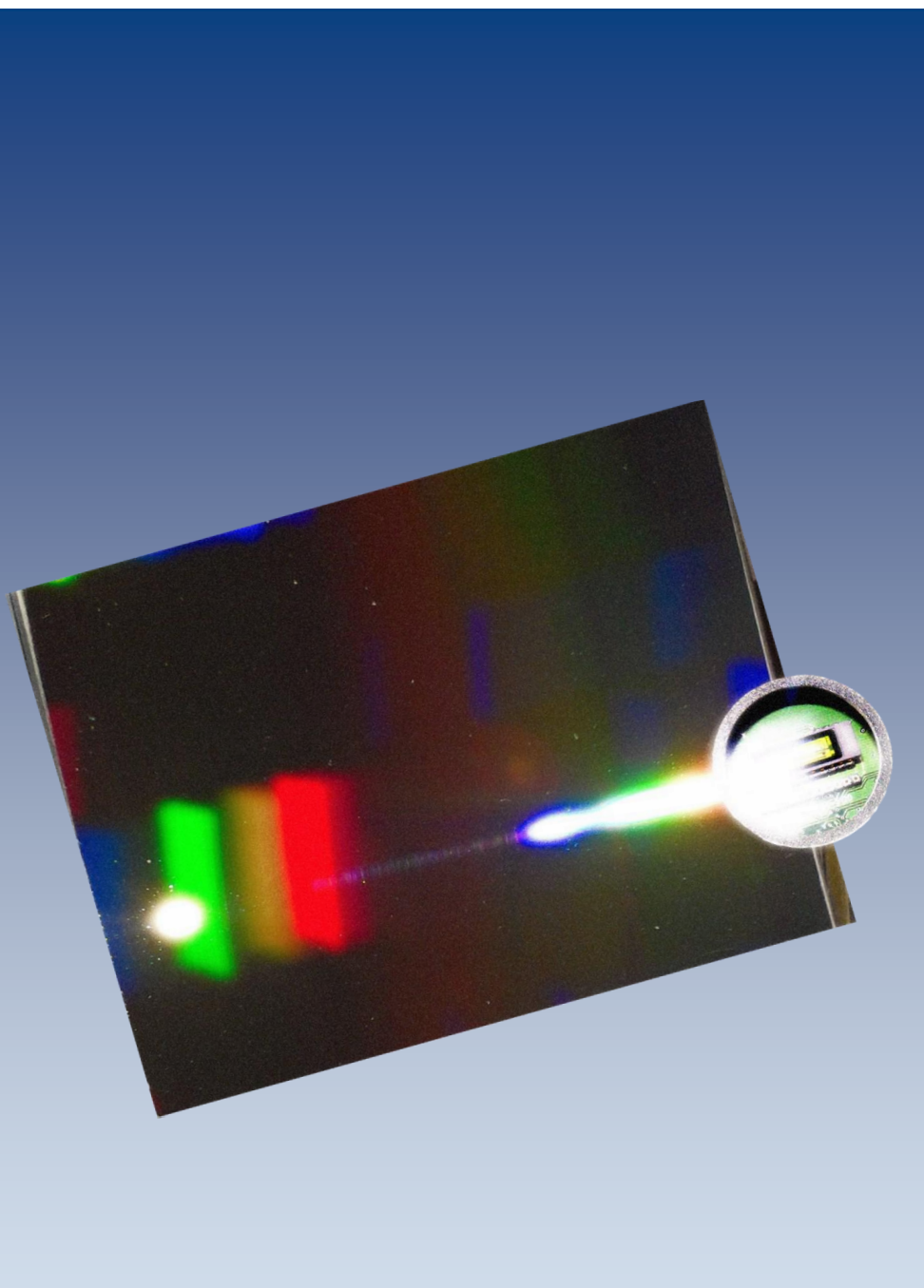




Applications

- Pulsed Solar Radiation Measurement
- Solar simulator testing and classification
- Light source metrology

Features

- Fast data acquisition and easy operation
- UV-Vis-IR spectral range 300-2000nm
- Integration time ≥ 0.5 ms
- UV-VIS detector array and IR-InGaAs arrays
- Spectral resolution UV-Vis 2 nm, IR 6 nm
- Holographic concave flat field gratings and beam splitting optics
- 16bit digitization
- TE cooled sensors

Scientific Spectroradiometer SCI-VIDI

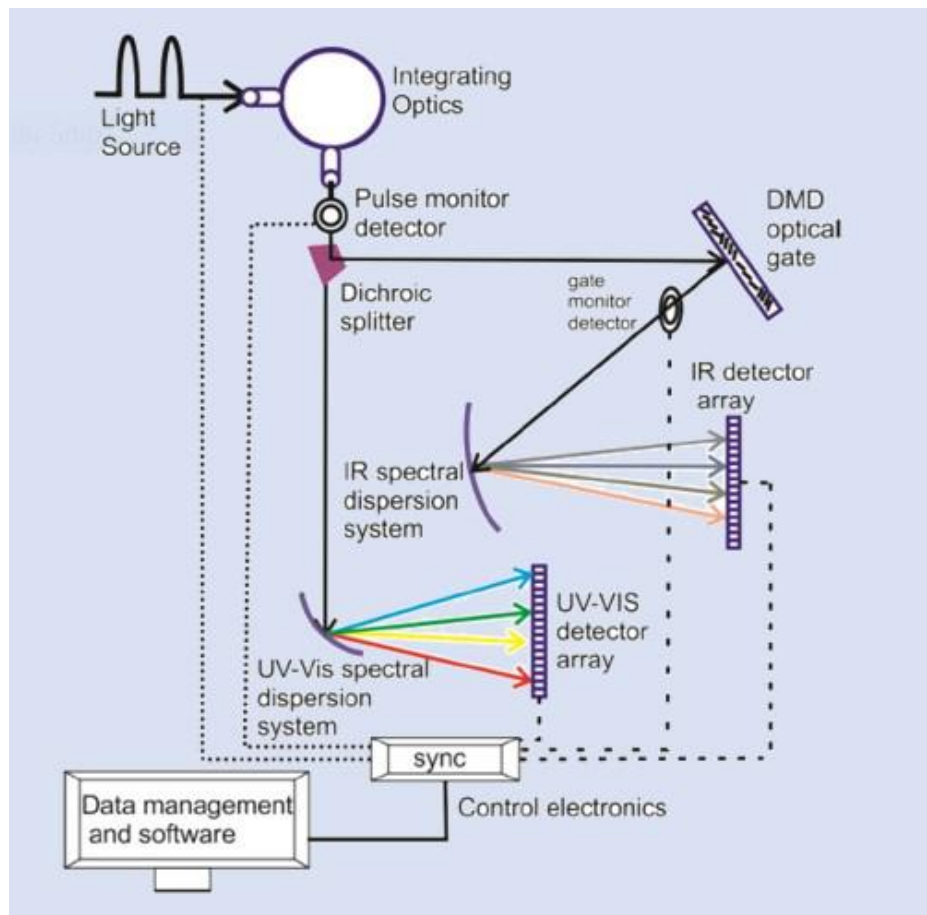
SCI-VIDI Scientific Spectroradiometer

OVERVIEW

Sciencetech manufactures spectroradiometers covering a spectral range from 300 -2000 nm. Sciencetech Spectroradiometers are designed for accurate measurements of radiometric quantities. Photometric, colorimetric, and UV radiometric quantities can be determined using software to integrate and weight measurement values.

Time resolved UV-Vis-IR Spectroradiometer system

Configuration



SCI-VIDI Scientific Spectroradiometer

SPECIFICATIONS

- High sensitivity with a high signal-to-noise ratio
- Adjustable integration and scan averaging time
- Compact, lightweight design – portable and easy to fit in any experimental setup
- Spectral calibration (Hg (Ar) and HeNe laser) and NIST traceable calibration for spectral irradiance (Optoelectronics OL-220C)
- No internal fiber optics or movable gratings that can break, drift, or fail during mission critical experiments
- SciSolarQ software enables analysis of the spectral irradiance measurement results and comparison with different solar simulator standards like ASTM E927, IEC-60904-9 and MIL-STD-81

Model	Sci—VIDI
Spectral range	300-2000 nm
Arrangement	Flat field concave holographic gratings for UV-Vis and IR channel
Spectral resolution	2 nm @ UV-Vis 6 nm @ IR
Wavelength Uncertainty	<0.5nm
Wavelength reproducibility	0.1nm
UV-VIS Detector	Alphas 3600D-UV detector array, 3648 pixels, 8 um pixel size SNR: 300:1, Frame rate 269.5 Hz, Read out speed 1MHz, Operating temperature 0-30 °C
NIR-SWIR Detectors	Hamamatsu G9206-512 WB InGaAs linear array detector, 512 pixels 25um pixel size, TE cooled, Operating temperature -40-70 °C
IR Optical gate	5.29-mm diagonal micromirror array, Polarization-independent aluminum surface
Trigger	Trigger input, TTL
Shutter input	TTL, programmable state and delay (dark current shutter pulse standard) Optional high speed shutter available
Integration time	>=0.5 ms
Communications interface	USB
Software	SciSolarQ operates on Windows 10, 64 bit
Input power	120-230VAC

SCI-VIDI Scientific Spectroradiometer

SPECIFICATIONS

Calibration Options

Wavelength Calibration

All Sciencetech Sci-Vidi systems are calibrated for wavelength to the given specifications

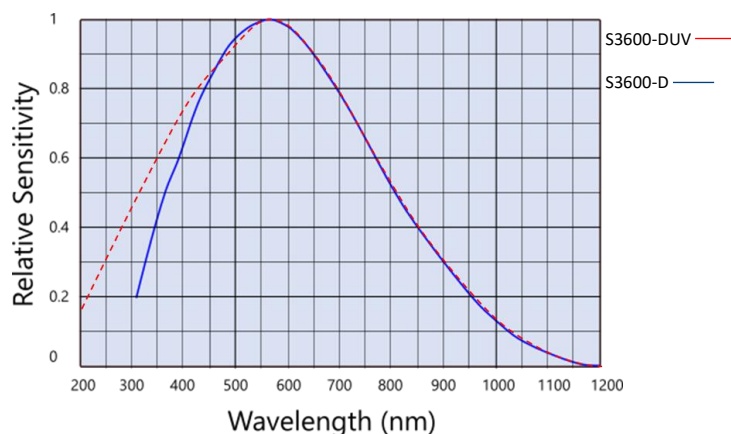
Radiometric Calibration

Sciencetech Sci-Vidi systems can be calibrated to NIST traceable standards using Optronic Laboratories OL220 calibrated reference lamp over the range of 300-2000nm

On Board Sensors

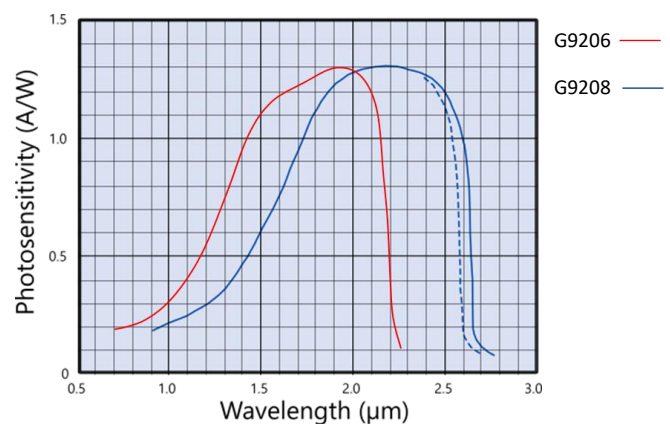
The Sci-VIDI instrument uses two high photosensitive linear array sensors to optimize system sensitivity and minimize dark noise. The array sensors cover large spectral range and exhibit wide dynamic range and simple operation. With precise control over integration parameters, trigger in and out (with programmable offset), the sensors display reliable synchronization from & to external devices (e.g. pulsed lasers), and gold-plated SMB connectors.

Normalized spectral sensitivity ($T = 25\text{ }^{\circ}\text{C}$) of Alphalas CCD-S3600-D-UV



VIS Detector Array

Spectral response of InGaAs linear image sensors of Hamamatsu (G9206 / G9208 series)



IR Detector Array

SCI-VIDI Scientific Spectroradiometer

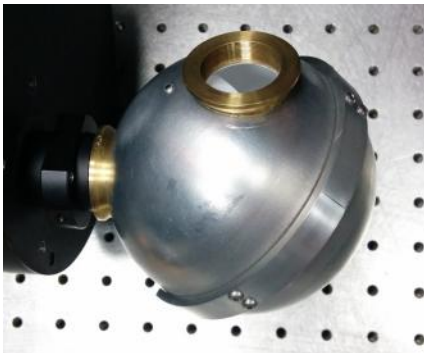
ACCESSORIES

Input Port Options



Motorized Slit SS-80 (120-9035 + 120-9038)

The SS-80 slit has straight, bilaterally adjustable jaws with spacing between 0 and 6.5mm. The motor has an accuracy of 10um. A manual curtain slider can be used to adjust the height of the slit.



Integrating Sphere (various options available)

Integrating spheres are used with radiometers to produce uniform angle correct illumination at the entrance port of the monochromator.

Sciencetech integrates both 4" diameter and 2" diameter integrating spheres. Spheres with 3 or 4 ports can be accommodated.



Fiber Input (SMA or FC)

Fiber optics (with standard 250 field of view) can be mated to the input port of the Sci-Vidi. Fiber optic inputs allow for the greatest flexibility in selecting what the Sci-Vidi instrument is looking at.