OPTRONIC[®] L A B O R A T O R I E S

OL 770-InGaAs

NIR Spectroradiometer



The OL 770-InGaAs is a high-speed, multi-channel spectroradiometer that covers the 850 – 1700 nm spectrum, in addition to the current 200-780 nm and 380-780 nm versions of the OL Series 770 that are already available. Applications range from chemometrics and determining atmospheric absorption, to solar simulation and IRED source measurements. The modular design of the 770 product line makes it easy to integrate the InGaAs system into an existing setup to cover an even wider spectral range without needing to procure additional accessories.

The OL 770-InGaAs was designed for customers who require fast measurement results but not at the expense of quality or precision. It is accurate enough to characterize IR sources for R&D purposes, but economical, lightweight, and portable enough for performing rapid QC checks on the production floor.

The OL 770-InGaAs's control electronics, internal spectrograph, and detector are housed in one rugged, portable enclosure. Its lightweight and small footprint design, relative to larger scanning spectroradiometers, makes it an ideal instrument for use in production environments, especially where portability is needed. The instrument is equipped with both RS-232 and Universal Serial Bus (USB) interfaces, thus a plug-in card for the PC host is not required. The USB interface provides for extremely fast measurements and allows laptops to be utilized. The OL 770-InGaAs sets up quickly with a simple flip of the on/off switch. The fiber optic plugs into the entrance port on the front of the unit, enabling the user to place the test module in a convenient location.

The unique internal spectrograph is based on an aberration corrected, concave, flat field diffraction grating. The precision optics of the spectrograph delivers low stray light performance, high spectral resolution, and excellent wavelength accuracy. The standard grating operates over the $0.85 - 1.7 \mu m$ wavelength range.

An interchangeable slit (100 microns standard) is provided in the entrance port on the front panel of the OL 770-InGaAs. Other slit sizes for varying the optical bandwidth are available.

Whether you manufacture solar simulators or are looking to characterize lens or optical fibers that requires quality, consistency, and continuity, the OL 770-InGaAs is an absolute must.



Data Sheet: B080 Dec 2020 | Rev A As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

Software Features

The OL 770-InGaAs Application Software is a highly intuitive, Windows-based software package, which combines utility programs and data reduction routines with specific application software for a completely integrated operating system. The software operates on any Microsoft Windows[®] compatible computer utilizing mouse and/or keyboard control for menu selection. Because the software is Windows[®] compatible, it provides you with a computing environment consistent with your every day computer activity. Measurement windows can be minimized, resized, and opened multiple times allowing you to configure the application environment to suit your individual style.



- Windows7/XP platform
- Real-time graphics utility
- Custom report templates
- MS Excel and Word compatible direct reporting
- Display, log, and store resultant data
- Comparison cursors
- Value Monitor for real time pass/fail display of any calculated values
- Software level triggering for data acquisition
- Peak wavelength
- Spectral bandwidth (FWHM)
- Power
- Intensity profile polar plots
- Total Spectral flux
- Radiant intensity
- LabVIEW example utilizing Active X control
- Cursor snap to peak/ valley
- Accumulation graphs for time studies
- Optional Active X Control Software Development Kit

OL 620 CCD IMAGING TELESCOPE SPECIFICATIONS

Wavelength Range (Standard)	850 nm – 1.7 μm
Wavelength Accuracy	±1.0 nm
Optical Bandwidth (With 100 Micron Slit)	~10 nm
Number of Pixels	512
Spectral Resolution	≈1.8 nm
Slits (User Interchangeable)	100 micron (<i>standard</i>) ; 50, 200 (optional)
Optical Focal Length	140 mm
Optical Input	1.0 mm Diameter x 1.0 Meter Fiber
Optical Aperture	f/2
Operating Temperature	5 to 30° C
Detector Cooling Temperature	0° C
Integration Time	1 ms – 10 minutes
A/D Resolution	16 bits
A/D Rate	250 kHz
Power Input	100/115/220/230 Vac
Interface	USB, RS-232
Dimensions	7¼″ W x 13½″ H x 13″ D (18.4 cm W x 33.6 cm H x 33.0 cm D)
Weight	22.5 lbs <i>(10.2 kg)</i>



Data Sheet: B080 Dec 2020 | Rev A As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

For more information visit OptronicLabs.com or contact Info@OptronicLabs.com