

Photoreceiver

PR-130 Photoreceiver



A Novanta Company



- Low-noise photoreceiver
- Detection between 320 nm to 1000 nm
- High sensitivity

Overview

PR-130 is a multi-purpose low-noise photoreceiver intended to detect a small AC signal on a large DC component. It is ideally suited for highly sensitive optical signal detection at wavelengths between 320 nm to 1000 nm.

Key features are: high sensitivity, high-speed response, and broad wavelength range. A DC monitor output port provides ease of alignment and reliable detector overstress protection.

Power supply not included. A conventional stabilised laboratory voltage source is suitable.

Specifications

PR-130	
3-dB bandwidth	25 kHz to 130 MHz
Wavelength range	320 nm to 1000 nm
Integrated noise*	350 nW _{RMS}
Typ. max. responsivity	0.55A/W @ 820 nm
Transimpedance gain	4 x 10 ⁴ V/A
Peak conversion gain	2.2 x 10 ⁴ V/W
DC transimpedance gain	1V/mA
Output impedance	50 Ohms
Max. average optical power	7 mW
Max. DC photovoltage	3 V
Photodetector type	Si PIN
Photodetector diameter	0.8 mm
Optical input	free space
Coupling	AC
AC output connector	SMA (female)
DC monitor output connector	SMB/BNC
Power requirement	±15 V, 200 mA
Dimensions (mm)	60(L) x 60(W) x 40(H)

* 25kHz to 130MHz bandwidth

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Spectrometers

USB spectrometer



A Novanta Company

- Broadband scanning USB spectrometer
- Ideal for broad spectral bandwidth
- Compact and robust



Overview

The spectra of our broadband **Venteon** oscillators are difficult to measure with standard Si-based CCD-spectrometers. Limited by the detector sensitivity these devices are only suitable to cover a spectral range up to 1050 nm, which is not enough for the broadband spectra of state-of-the-art femtosecond lasers such as **venteon ultra**, which covers a spectral range up to 1200 nm. So far only expensive and scanning optical spectrum analyser have been suitable for a reliable oscillator characterisation.

The TQ systems irSys USB spectrometer is a compact, mobile USB spectrometer that covers a wavelength range spanning from 610 nm up to 1700 nm, more than enough to characterise our broadest oscillators. This device is a scanning-type spectrometer and features a MEMS mirror array for scanning the spectral components onto a Si- as well as an InGaAs-detector.

USB Spectrometer TQ systems irSys Type I

Specifications

Wavelength range: 610-1700 nm SNR (single shot): 7000:1
Si- & InGaAs detectors Temperature dependency: 0.01nm/K
Spectral resolution: <5 nm

Technical data

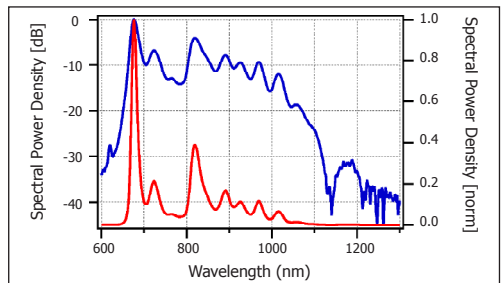
Fibre plug: SMA 905 Dimensions: 104 x 75 x 85 mm³
Interface: USB/RS485 Weight: ~750 g (~1.65 lbs)
Compatible with Windows 7,
XP & Vista

Included in delivery

USB spectrometer irSys Type 1
Power supply
USB cable & drivers
Spectrometer software & documentation



Very compact and robust scanning USB spectrometer irSys Type I, its dimensions measuring only 104 x 75 x 85 mm³.



Broadband spectrum recorded with irSys USB spectrometer shown on a logarithmic scale (blue) and linear scale (red). The wavelength range can be expanded up to 1700 nm.

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