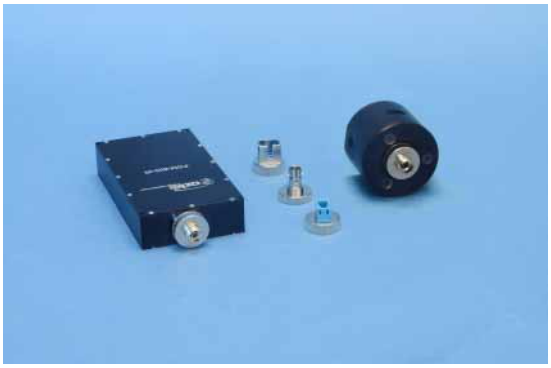
Low Cost Smart Detector Head (LSDH) Application Note

Low Cost Smart Detector Power Meter Head

The new Low Cost Smart Detector Head (LSDH) optical power meter from OZ Optics is unlike most conventional optical power meters. It retains the features of the original Smart Detector Head, at significantly lower cost. An optical detector, microprocessor, and calibration table form an intelligent optical power head that is the most competitive and unique product in the optical power meter market.



OZ Optics Ltd. POM-600-IR and LSDH

Solution Requirements

- Retains settings in internal, non-volatile memory
- Communicates with a PC through RS-232 or USB I/F
- Built-in InGaAs detector for IR range or Si detector for visible range
- Interchangeable optical connectors

Power Monitoring

- Long-term remote power monitoring
- Fiber optic assembling and testing
- Optical test systems
- Passive optical component burn-in stations
- General optical power measurements
- Embedded systems

Versatility

- IR: 1064, 1310, 1480, 1550, 1625 nm
- VIS: 520, 635, 780, 850, 980 nm
- mW, dBm, and dB
- FC; AT&T-ST; SC and LC

Parts and Accessories

- Low Cost Smart Detector Head (VIS or IR)
- Serial interface cable
- Operating Instructions
- Certificate of Compliance
- LSDH software I/F and drivers
- Free downloadable GUI

For more information on any of our products or services, please visit us on the Web at:
www.ozoptics.com

The Low Cost Smart Detector Head/Optical Power Monitor can be configured with a built-in PIN InGaAs detector for 900 nm to 1650 nm wavelengths or with a PIN Si detector for 450 nm to 1000 nm wavelengths. Offered with a high -60 dB linear dynamic range, the unit can be ordered with discrete wavelength calibration, for absolute power measurement ,or without wavelength calibration, for relative power measurement. Customers can also perform their own calibration.

The OEM version (with no built-in display) comes with a USB interface in the LSDH, and with an RS-232 interface in the POM-600 (rectangular base). **OEM modules can be embedded in systems for remote power monitoring or for long term power logging for burn-in test stations.** OZ Optics also offers equivalent POM-600 units with built-in displays.

The LSDH is offered with a replaceable fiber interface. The standard removable receptacles are FC, SC, ST and LC—other types can be provided to meet your requirements.

Parameter	Specification	
Measurement range	IR	-53 dBm to +7 dBm
	VIS	-53 dBm to +7 dBm
Wavelength range	900 to 1650 nm with IR detector 450 to 1000 nm with VIS detector	
Resolution	0.01 dB	
Accuracy	± 5% (+0 to -50 dBm) at calibrated wavelengths using singlemode fiber and FC/PC receptacle	
Linearity	± 0.05 dB (+0 to -50 dBm).	

*OZ Optics reserves the right to change any specifications without prior notice.

Low Cost Smart Detector Head

Dimensions

(L x W x H)

- LSDH: 37.3 x 40.7 x 40.7 mm
- POM-600: 96 x 54 x 19.2 mm

Baud Rate

(using RS-232)

- 9600, 14 400, 19 200, 28 800, 38 400, or 57 600 baud for POM-600 connection to PC

Power Supply

+5 VDC via USB
+4 to +8 VDC (POM-600)

Accuracy

± 5% (+0 to -50 dBm) calibrated wavelengths using singlemode fiber and FC/PC receptacle

Linearity

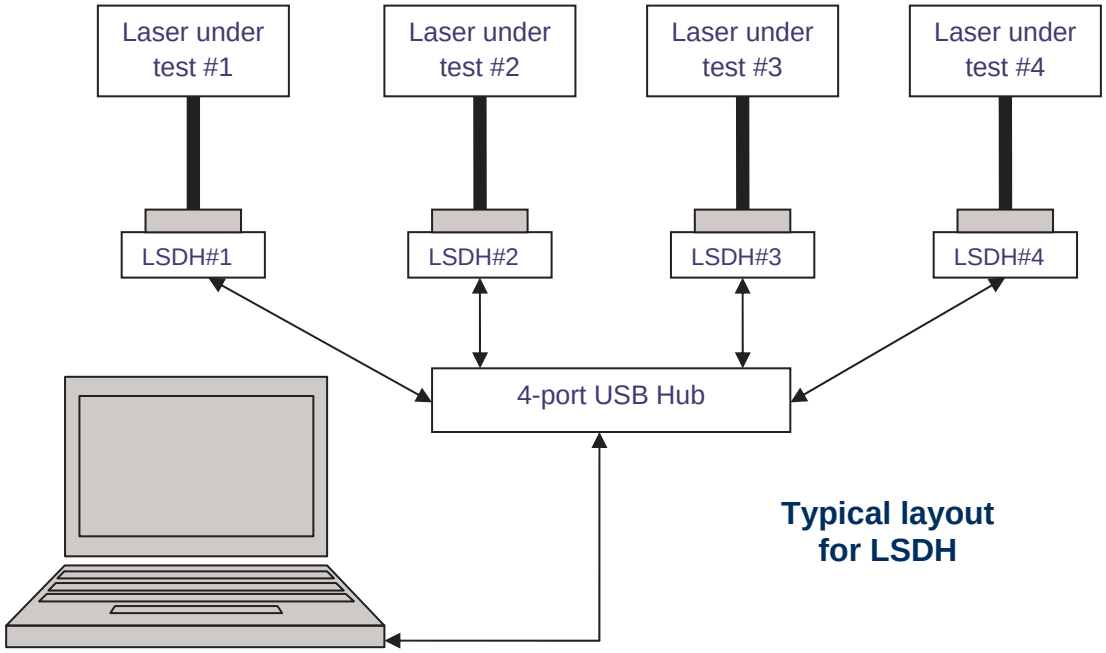
± 0.05 dB (+0 to -50 dBm)

See the Low Cost Smart Detector Head Data Sheet at: https://www.ozoptics.com/ALLNEW_PDF/DTS0155.pdf

The LSDH is configured in two ways: rectangular with RS-232 interface, and round with USB interface.

POM-600

LSDH



Typical layout for LSDH

The Low Cost Smart Detector Head/Optical Power Monitor is offered as an OEM module (with no built-in display). For the simplest configuration, one LSDH Optical Power Monitor can be connected to a host computer where the user can install the OZ Optics' Graphical User Interface (GUI) on a host PC, or develop a custom GUI, to measure, display, and/or log optical power transmitted through a pigtailed fiber optics device attached to the detector head.

Several detector heads can be integrated into an Environmental Optical Test System (EOTS) to create an environmental optical test for long-term optical power logging. The device commands can remotely control the LSDHs embedded in the measurement system.

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