

USB-Controlled Optical Power Monitor

Highlights

- Low cost
- Wavelength ranges
 - 190-950 nm
 - 800-1550 nm
 - 800-1650 nm
 - 400-1600 nm
- Bandwidth
 - 10 kHz



Applications

- Service
- Laboratory
- R&D
- OEM



Principle of Operation

The OPM150 employs high quality, large area photodiodes with a precise analogue transimpedance amplifier and digital signal processing.

The photodiode head has a diameter of 25mm for mounting in standard optomechanical systems. The signal processing unit is very compact for simple integration in OEM systems.

Fields of application

These power monitors are particularly suitable for field use such as laser servicing or in OEM applications. The unit is USB powered: no external power supply is required. The analogue bandwidth is 10kHz and is sampled at up to 30 Hz using the graphical software supplied.

The large detector surface ensures easy use.



Absolute Maximum Values

Average power	15mW
Temperature range	0 – 60 °C

Ordering Information

Base module: OPM150

Detector heads:

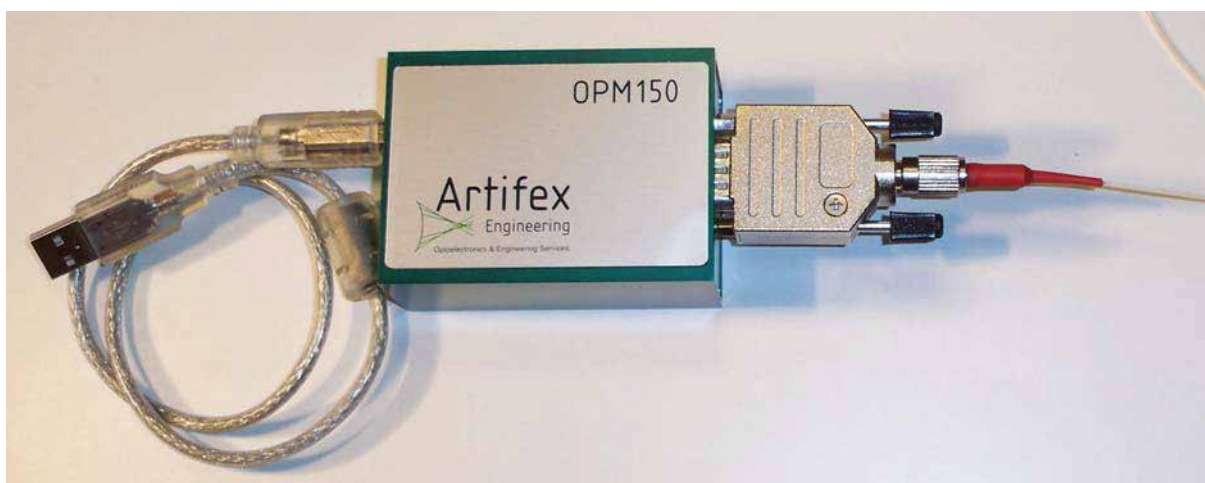
Full order code: OPM 150 **d**

	Options	Description
Diode material (d):	UVS	190-950nm; 10x10mm
	G5	800-1550nm; ϕ 5mm
	G10	800-1550nm; ϕ 10mm
	IGA	800-1650nm; ϕ 3mm
	VIGA	400-1600nm; ϕ 3mm
	VIGAFC	400-1600nm; FC receptacle



For direct measurements on fibre optics:

OPM150VIGAFC



For customised solutions, please contact us.

Specifications

PARAMETER INPUT	CONDITIONS	SI			UNITS
		MIN	TYP	MAX	
Wavelength range	UVS	190		950	nm
Power ranges (full scale)			10.0 ¹ 1 100 10 1		mW mW µW µW µW
Noise equivalent power (NEP _{RMS})	Min @ 900 nm Max @ 190 nm	5 500 50 5 500		25 2500 250 25 2500	µW nW nW nW pW
OUTPUT					
Function			Linear analogue $V_{out} = scale \times P_{in}$		
Connectors			DB9 and USB		
Bandwidth			10		kHz
Sampling rate	GUI-Control Direct polling		30 1000		S/s
Accuracy		± 10			%
Reproducibility		± 3			%
Linearity			± 0.2	± 0.4	dB
SUPPLY					
Type			USB		
DIMENSIONS					
			60 x 81 x 36 mm (B x L x H)		mm

Case



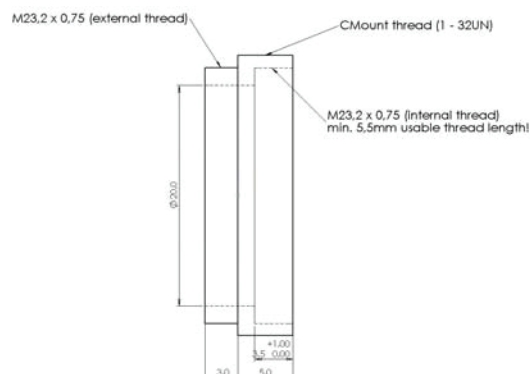
¹ Linearity guaranteed to 1mW (0dBm)

Accessories

We stock a wide range of accessories for this product to ensure absolute ease of use.

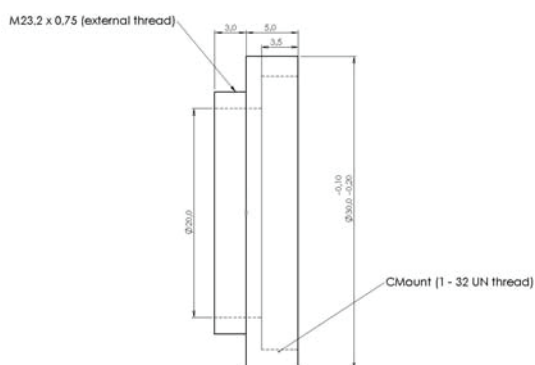
Adapter C-Mount male thread

Order code: 20.430.00005



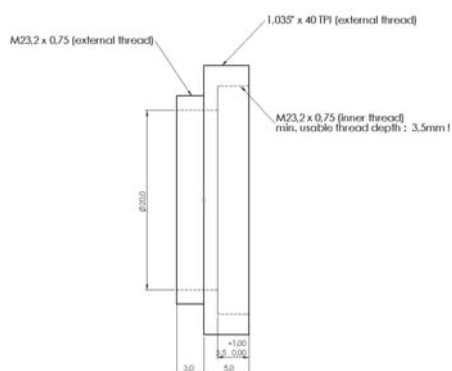
Adapter C-Mount female thread

Order code: 20.430.00006



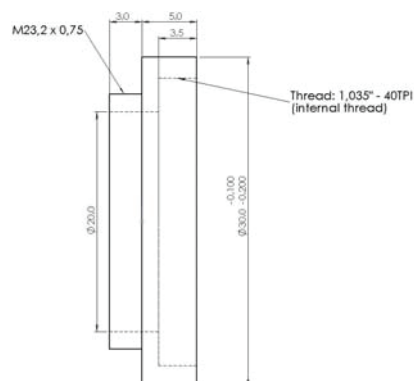
Adapter lens tube system (1.035" x 40TPI) male thread

Order code: 20.430.00004



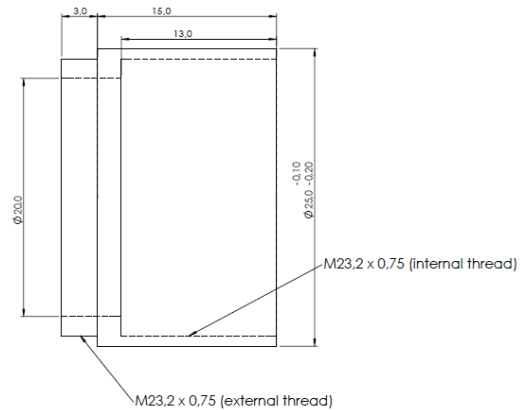
Adapter lens tube system (1.035" x 40TPI) female thread

Order code: 20.430.00007



Filter holder for mounting loose filters. The thread length allows cascading several filter holders.

Order code: 20.430.00003



Calibrated Filters

Our filters are mounted in the filter holder depicted above and can be screwed onto the front end of the OPM150 detector head. Each filter is delivered with a calibration file which can be read into the OPM150 graphical software. In this manner, the calibration of the full system is guaranteed.

Neutral density (ND) filters

ND Filter, absorbing type	OD1: Transmission = 10%	Order code 30.070.00014
ND Filter, absorbing type	OD2: Transmission = 1%	Order code 30.070.00015
ND Filter, absorbing type	OD3: Transmission = 0.1%	Order code 30.070.00016

Please note that reflecting ND filters cannot be cascaded.