

# XLP12

12 mm Ø, 1 µW - 3 W – Low Power Thermopile



## KEY FEATURES

- 1 Low Power Thermopile**  
Noise level of a photo detector with the large bandwidth and high power capacity of a thermal device
- 2 Minimal Thermal Drift**  
Only 6 µW/°C (with the IR filter)
- 3 High Sensitivity**  
200 mV/W (without the IR filter)
- 4 IR Filter (XLP12F Model)**  
Removes unwanted IR interference
- 5 Isolation Tube**  
Eliminates power fluctuations created by air turbulence
- 5 Smart Interface**  
Containing all the calibration data

## AVAILABLE MODELS



XLP12-3S-H2  
(3W-Standalone)



XLPF12-3S-H2  
(3W-Standalone-IR Filter)

## ACCESSORIES



Stand with Steel Post



Extension Cable  
(4, 15, 20 or 25 m)



IR Filter  
(Mounted)



Fiber Adaptors & Connectors  
(FC, SC, ST and SMA)



Pelican Carrying Case

## SEE ALSO

HOW IT WORKS	12
CALIBRATION	6
TECHNICAL DRAWINGS	98
ABSORPTION CURVES	103
COMPATIBLE MONITORS	
MAESTRO	18
TUNER	22
UNO	24
S-LINK-2	26
P-LINK	28

# XLP12

## SPECIFICATIONS



\*Also traceable to NRC-CNRC

MODELS	XLP12-3S-H2	XLPF12-3S-H2
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	3 W / 3 W	3 W / 3 W
EFFECTIVE APERTURE	12 mm Ø	12 mm Ø
COOLING METHOD	Convection	Convection

### MEASUREMENT CAPABILITY

Spectral Range	0.19 – 20 µm	0.28 – 2.1 µm
Noise Equivalent Power <sup>a</sup>	±0.5 µW	±0.5 µW
Thermal Drift <sup>b</sup>	12 µW/°C	6 µW/°C
Rise Time (nominal) <sup>c</sup>	2.5 sec	2.5 sec
Sensitivity (typ into 100 kΩ load) <sup>d</sup>	200 mV/W	180 mV/W
Calibration Uncertainty <sup>e</sup>	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %
Energy Mode		
Sensitivity	25 mV/J	22.5 mV/J
Maximum Measurable Energy <sup>f</sup>	5 J	5 J
Noise Equivalent Energy <sup>a</sup>	12 µJ	12 µJ
Minimum Repetition Period	16 sec	16 sec
Maximum Pulse Width	300 ms	300 ms
Accuracy with energy calibration option	±5 %	±5 %

### DAMAGE THRESHOLDS

Maximum Average Power Density <sup>g</sup>	1 kW/cm <sup>2</sup>	1 kW/cm <sup>2</sup>
Pulsed Laser Damage Thresholds	Max Energy Density	Peak Power Density
1064 nm, 360 µs, 5 Hz	5 J/cm <sup>2</sup>	14 kW/cm <sup>2</sup>
1064 nm, 7 ns, 10 Hz	1 J/cm <sup>2</sup>	143 MW/cm <sup>2</sup>
532 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>	86 MW/cm <sup>2</sup>
266 nm, 7 ns, 10 Hz	0.3 J/cm <sup>2</sup>	43 MW/cm <sup>2</sup>

### PHYSICAL CHARACTERISTICS

Effective Aperture Diameter	12 mm Ø	12 mm Ø
Absorber (High Damage Threshold)	H2	H2
Dimensions	73H x 73W x 20D mm (72D mm with tube)	73H x 73W x 28D mm (80D mm with tube)
Weight (head only)	0.31 kg	0.32 kg

### ORDERING INFORMATION

Full Product Name	XLP12-3S-H2	XLPF12-3S-H2
Product Number (Including stand)	201035	201078

a. Nominal value, actual value depends on electrical noise in the measurement system.  
 b. With Gentec-EO MAESTRO.  
 c. With Gentec-EO MAESTRO, UNO, P-LINK and S-LINK-2 monitors.  
 d. Maximum output voltage = sensitivity x maximum power.

e. Including linearity with power.  
 f. For 360 µs pulses. Higher pulse energy possible when customized for long pulses (ms), less for short pulses (ns).  
 g. At 1064 nm, 1 W CW.

Specifications are subject to change without notice