

# XLP12



12 mm Ø, 1 µW - 2 W, eXtreme Low Power



## Key Features

- 1 **Low Power Thermopile**  
Noise level of a photo detector with the large bandwidth of a thermal device
- 2 **Minimal Thermal Drift**  
Only 6 µW/°C (with the IR filter)
- 3 **Very 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
- 6 **Smart Interface**  
Containing all the calibration data



XLP12-1S-H2

XLP12F-1S-H2  
(with IR Filter)



**NEW**

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## Accessories

### » IR Filter

Improve the stability of your readings by removing any influence from outside IR radiations.

### » Extension Cables (4, 15, 20 and 25 m)

For some OEM, manufacturing and laboratory applications.





### » Pelican Carrying Case

We offer a robust hard shell polymer carrying case.



## SPECIFICATIONS

Models	XLP12-1S-H2	XLP12F-1S-H2
		
Max Average Power (continuous)	1 W	1 W
Max Average Power (1 minute)	2 W	2 W

MEASUREMENT CAPABILITY	XLP12-1S-H2	XLP12F-1S-H2
Spectral Range	0.19 – 20 $\mu\text{m}$	0.28 – 1.36 $\mu\text{m}$
Noise Equivalent Power <sup>a</sup>	$\pm 0.5 \mu\text{W}$	$\pm 0.5 \mu\text{W}$
Thermal Drift	12 $\mu\text{W}/^\circ\text{C}$	6 $\mu\text{W}/^\circ\text{C}$
Rise Time (nominal) <sup>b</sup>	2.5 sec	2.5 sec
Sensitivity (typ into 100 k $\Omega$ load) <sup>c</sup>	200 mV/W	180 mV/W
Calibration Uncertainty <sup>d</sup>	$\pm 2.5 \%$	$\pm 2.5 \%$
Repeatability	$\pm 0.5 \%$	$\pm 0.5 \%$
Energy Mode		
Sensitivity	25 mV/J	25 mV/J
Maximum Measurable Energy <sup>e</sup>	5 J	5 J
Noise Equivalent Energy <sup>a</sup>	12 $\mu\text{J}$	12 $\mu\text{J}$
Minimum Repetition Period	16 sec	16 sec
Maximum Pulse Width	300 ms	300 ms
Accuracy with energy calibration option	$\pm 5 \%$	$\pm 5 \%$

## DAMAGE THRESHOLDS

Maximum Average Power Density <sup>f</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 $\mu\text{s}$ , 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 $\emptyset$	12 mm $\emptyset$
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	XLP12-1S-H2	XLP12F-1S-H2
Product Number (including stand)	201035	201078

a. Nominal value, actual value depends on electrical noise in the measurement system.

b. With Gentec-EO SOLO, UNO, P-LINK and S-LINK-2 monitors.

c. Maximum output voltage = sensitivity x maximum power.

d. Including linearity with power.

e. For 360  $\mu\text{s}$  pulses. Higher pulse energy possible when customized for long pulses (ms), less for short pulses (ns).

f. At 1064 nm, 1 W CW.

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### Calibration Centers

Quebec City, Canada  
Olching (Munich), Germany