

# XLP12

12 mm Ø, 0.5 µW - 3 W, low power thermopile



## KEY FEATURES

- **LOW POWER THERMOPILE**  
Noise level of a photodetector with the large bandwidth and high power capacity of a thermal device
- **MINIMAL THERMAL DRIFT**  
Only 6 µW/°C (with the IR filter)
- **HIGH SENSITIVITY**
- **SPECIAL MODEL FOR ULTRASHORT PULSES**  
VP (volume absorber) version is perfect for low power lasers with ultrashort pulses (ps and fs)
- **IR FILTER (XLPF12 MODEL)**  
Removes unwanted IR interference
- **ISOLATION TUBE**  
Eliminates power fluctuations created by air turbulence

## OUTPUT OPTIONS

- **SMART DB15 CONNECTOR**  
Contains all the calibration data
- **integra ALL-IN-ONE-METER**  
Connects directly to a PC  
Two models available:
  - USB output (-INT)
  - RS-232 output (-IDR)

## COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTITUDE



MAESTRO



TUNER



UNO



U-LINK and P-LINK



S-LINK and M-LINK

## ACCESSORIES



Stand with steel post



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



IR filter  
(Mounted)



Fiber adaptors & connectors  
(FC, ST and SMA)



Pelican carrying case






Extra isolation tube

# XLP12

## Specifications

CE NIST\*  
Traceable  
\*Also traceable to NRC-CNRC



	XLP12-3S-H2-D0	XLP12-3S-H2-D0	XLP12-3S-VP-D0
<b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b>	3 W / 3 W Broadband absorber	3 W / 3 W Broadband absorber, with IR filter	3 W / 3 W Volume absorber
<b>EFFECTIVE APERTURE</b>	12 mm $\phi$	12 mm $\phi$	12 mm $\phi$
<b>COOLING METHOD</b>	Convection	Convection	Convection
<b>MEASUREMENT CAPABILITY</b>			
<b>Spectral range</b>	0.19 - 20 $\mu\text{m}$	0.28 - 2.1 $\mu\text{m}$	0.248 - 20 $\mu\text{m}$
<b>Calibrated spectral range <sup>a</sup></b>	0.248 - 2.1 $\mu\text{m}$	0.308 - 2.1 $\mu\text{m}$	0.248 - 2.1 $\mu\text{m}$
<b>Noise equivalent power <sup>b</sup></b>	0.5 $\mu\text{W}$	0.5 $\mu\text{W}$	0.5 $\mu\text{W}$
<b>Thermal drift <sup>c</sup></b>	12 $\mu\text{W}/^\circ\text{C}$	6 $\mu\text{W}/^\circ\text{C}$	12 $\mu\text{W}/^\circ\text{C}$
<b>Rise time (nominal) <sup>d</sup></b>	2.5 s	2.5 s	3 s
<b>Calibration uncertainty <sup>e</sup></b>	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$
<b>Repeatability</b>	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
<b>Energy mode</b>			
Maximum measurable energy <sup>f</sup>	5 J	5 J	---
Noise equivalent energy <sup>b</sup>	12 $\mu\text{J}$	12 $\mu\text{J}$	---
Minimum repetition period	16 s	16 s	---
Maximum pulse width	300 ms	300 ms	---
Accuracy with energy calibration option	$\pm 5\%$	$\pm 5\%$	---
<b>DAMAGE THRESHOLDS</b>			
<b>Maximum average power density <sup>g</sup></b>	1 kW/cm <sup>2</sup>	1 kW/cm <sup>2</sup>	30 W/cm <sup>2</sup> at 1064 nm 8 W/cm <sup>2</sup> at 532 nm 4 W/cm <sup>2</sup> at 355 nm
<b>Maximum energy density</b>			
1064 nm, 360 $\mu\text{s}$ , 5 Hz	5 J/cm <sup>2</sup>	5 J/cm <sup>2</sup>	---
1064 nm, 7 ns, 10 Hz	1 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>	4 J/cm <sup>2</sup>
532 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	3 J/cm <sup>2</sup>
355 nm, 7 ns, 10 Hz	---	---	1 J/cm <sup>2</sup>
266 nm, 7 ns, 10 Hz	0.3 J/cm <sup>2</sup>	0.3 J/cm <sup>2</sup>	---
<b>PHYSICAL CHARACTERISTICS</b>			
<b>Effective aperture</b>	12 mm $\phi$	12 mm $\phi$	12 mm $\phi$
<b>Absorber (high damage threshold)</b>	H2	H2	VP (Volume absorber)
<b>Dimensions</b>	73H x 73W x 20D mm (72D mm with tube)	73H x 73W x 20D mm (80D mm with tube)	73H x 73W x 20D mm (72D mm with tube)
<b>Weight (head only)</b>	0.31 kg	0.32 kg	0.32 kg
<b>ORDERING INFORMATION</b>			
<b>Available output options</b>	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
<b>Compatible stand</b>	STAND-S-233	STAND-S-233	STAND-S-233
<b>Product page</b>			

- a. Calibrations at 21 to 2.5  $\mu\text{m}$  and 10.6  $\mu\text{m}$  are available on special request.  
 b. Nominal value, actual value depends on electrical noise in the measurement system.  
 c. With Gentec-EO MAESTRO.  
 d. With anticipation.  
 e. Including linearity with power.  
 f. For 360  $\mu\text{s}$  pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).  
 g. At 1064 nm, 1 W CW.

Specifications are subject to change without notice