11XLP12

LOW POWER THERMOPILE

12 mm Ø, 05 µW - 3 W

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC

Key Features

- **LOW POWER THERMOPILE**
  Noise level of a photo detector 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**
  200 mV/W (without the IR filter)
- **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
- **SMART INTERFACE**
  Containing all the calibration data

Available Models

XLP12-3S-H2	XLPF12-3S-H2	XLP12-3S-VP
3W-Broadband	3W-Broadband-IR Filter	3W-Volume absorber

Specifications

	11XLP12-3S-H2	11XLPF12-3S-H2	11XLP12-3S-VP
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	3 W / 3 W Broadband Absorber	3 W / 3 W Broadband Absorber, with IR Filter	3 W / 3 W Volume Absorber
EFFECTIVE APERTURE	12 mm Ø	12 mm Ø	12 mm Ø
COOLING METHOD	Convection	Convection	Convection
MEASUREMENT CAPABILITY			
Spectral Range	0.19 – 20 µm *	0.28 – 2.1 µm [a]	0.25 – 20 µm *
Noise Equivalent Power [b]	0.5 µW	0.5 µW	0.5 µW
Thermal Drift [c]	12 µW/°C	6 µW/°C	12 µW/°C
Rise Time (nominal) [d]	2.5 sec	2.5 sec	3 sec
Sensitivity (typ into 100 kΩ load) [e]	200 mV/W	180 mV/W	220 mV/W
Calibration Uncertainty [f]	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %
Energy Mode			
Sensitivity	25 mV/J	22.5 mV/J	---
Maximum Measurable Energy [g]	5 J	5 J	---
Noise Equivalent Energy [b]	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 [h]	1 kW/cm²	1 kW/cm²	30 W/cm² @ 1064 nm 8 W/cm² @ 532 nm 4 W/cm² @ 355 nm
Pulsed Laser Damage Thresholds	Max Energy Dens. / Peak Power Dens.	Max Energy Dens. / Peak Power Dens.	Max Energy Dens. / Peak Power Dens.
1064 nm, 360 µs, 5 Hz	5 J/cm² / 14 kW/cm²	5 J/cm² / 14 kW/cm²	--- / ---
1064 nm, 7 ns, 10 Hz	1 J/cm² / 143 MW/cm²	1 J/cm² / 143 MW/cm²	4 J/cm² / 571 MW/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm² / 86 MW/cm²	0.6 J/cm² / 86 MW/cm²	3 J/cm² / 429 MW/cm²
355 nm, 7 ns, 10 Hz	0.3 J/cm² / 43 MW/cm²	0.3 J/cm² / 43 MW/cm²	1 J/cm² / 143 MW/cm²
PHYSICAL CHARACTERISTICS			
Effective Aperture	12 mm Ø	12 mm Ø	12 mm Ø
Absorber (High Damage Threshold)	H2	H2	VP (Volume Absorber)
Dimensions	73H x 73W x 20D mm (72D mm with tube)	73H x 73W x 28D mm (80D mm with tube)	73H x 73W x 20D mm (72D mm with tube)
	0.31 kg	0.32 kg	0.32 kg
ORDERING INFORMATION			
Product name	11XLP12-3S-H2	11XLPF12-3S-H2	11XLP12-3S-VP

*For the calibrated spectral range, see the user manual.

a. This spectral range refers to the calibration traceability. For details, please contact us at: sales@standa.lt
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With 11MAESTRO.
d. With 11MAESTRO, 11UNO, 11P-LINK, 11TUNER and 11S-LINK monitors.
e. Maximum output voltage = sensitivity x maximum power.
f. Including linearity with power.
g. For 360 µs pulses. Higher pulse energy possible when customized for long pulses (ms), less for short pulses (ns).
h. At 1064 nm, 1 W CW.

Specifications are subject to change without notice