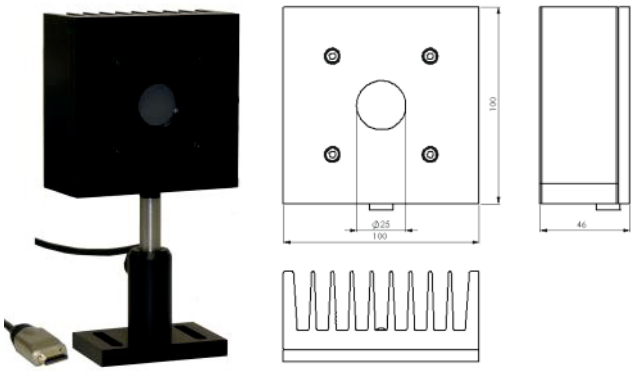
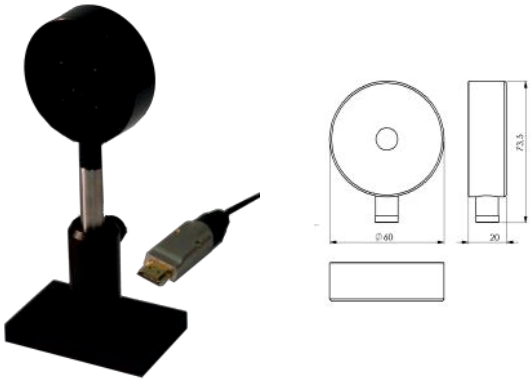
Thermopile Power Detectors
LP / BB Series



BB25

The heads of the **Series BB and LP** family have a black, broadband absorbing coating. The main characteristic of the **Series LP** sensor family is the very high sensitivity. This enables the sensor to measure small laser power with high precision and resolution over the high dynamic range of 5 orders of magnitude. For stabilisation of the sensor one can use a thermal isolation of the sensor housing. Additionally, the housing can adapt with a protection tube to protect the surface against stray light and air moving. You can also replace the tube by special adapters for using optical fibres.



LP10/BB10

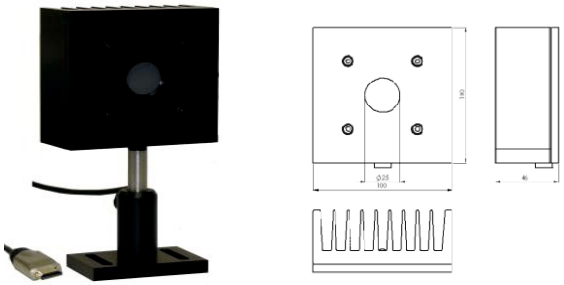
BB25 S

	LP10	BB10	BB25	BB25S
Active diameter	10 mm		25 mm	
Max. power	3 W		20 W	5 W
Min power	50 µW	100 µW	1 mW	
Response time	< 2 seconds (with display)			
max. power density	20 W/cm²			
Max. energy density	150 mJ/cm² (at 10 ns) | 500 mJ/cm² (at 10 µs)			
Sensitivity	≈400 mV/W		≈100 mV/W	
Linearity	±1%			
Calibration uncertainty	±3%			
Cooling	convection			
Spectral range	190 nm - 25 µm			
Connector	E-connector with EEPROM, Cable length 1.5m			
Dimensions [mm]	Ø 60, L: 20		100 x 100 x 46	Ø 90, L: 28

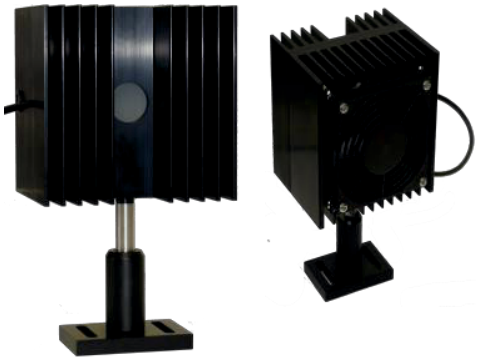
Power Detectors

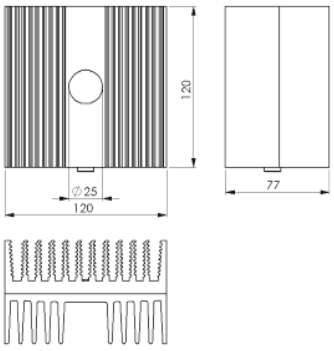
Thermopile Power Detectors
HP Series

The measuring heads from **Series HP** are provided with a inorganic absorbing layer which allows high energy and power densities also in a UV wavelength range.

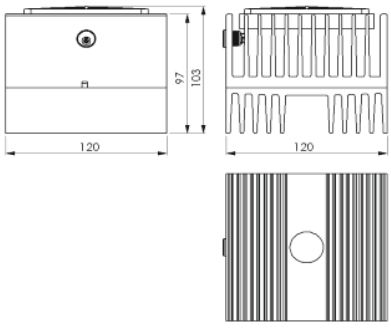


HP25/30





HP25/50



HP25/150

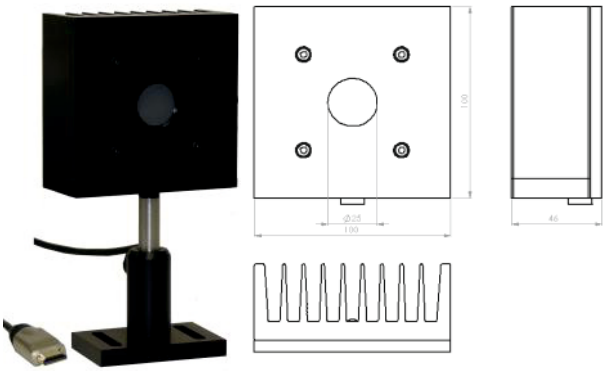
	HP 25/30	HP 25/50	HP 25/150
Active diameter	25 mm		
Max. power	30 W 50 W for 2 minutes	50 W 75 W for 2 minutes	150 W 200 W for 2 minutes
Min power	10 mW		100 mW
Response time	< 2 seconds (with display)		
Max. power density	10 kW/cm²		
Max. energy density	300 mJ/cm² (at 10 ns) | 1,2 J/cm² (at 10 µs)		
Sensitivity	≈1 mV/W		≈0.1 mV/W
Linearity	±1%		
Calibration uncertainty	±3%		
Cooling	convection		fan power supply 12V
Spectral range	190 nm - 15 µm		
Connector	E-connector with EEPROM, Cable length 1.5m		
Dimensions [mm]	100 x 100 x 46	120 x 120 x 77	120 x 120 x 103

Thermopile Power Detectors
CP Series

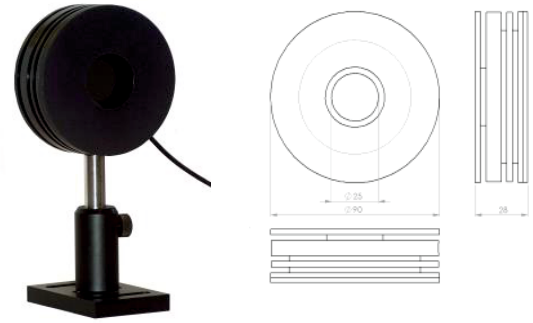
Main applications for this detector are pulse lasers with high power density (Excimer-, CO_2-,TEA-, Nd-YAG-Laser). With this device we offer a sensor that serves in a wide range of applications due to a high damage threshold, a short time constant, relatively high sensitivity and high aperture. The head **CP25S** is specially made for service application. The compact dimensions enable easier transport. Due to the smaller heat sink, high powers are only possible for a short time.

permissible power- and energy densities at selected wavelengths:

Laser	Peak power density	Energy density
Excimer, 308 nm, τ = 20 ns	50 MW /cm²	1 J/cm²
Nd:YAG, THG, 355 nm, τ = 7 ns	65 MW /cm²	450 mJ/cm²
Nd:YAG, SHG, 532 nm, τ = 8 ns	70 MW /cm²	560 mJ/cm²
Nd:YAG, 1064 nm, τ = 8 ns	120 MW /cm²	970 mJ/cm²
CO_2-TEA, 10,6 µm, τ = 0,5 µs	10 MW /cm²	5 J/cm²



CP25



CP25 S

	CP25	CP25 S
active diameter	25 mm	
Max. power	25 W 30 W for 2 minutes	8 W 10 W for 2 minutes
Min power	1 mW	
Response time	< 2 seconds (with display)	
max. power density	40 W/cm²	
Max. energy density	1 J/cm² (at 10 ns) | 5J/cm² (at 10 µs)	
sensitivity	≈100 mV/W	
linearity	±1%	
Calibration uncertainty	±3%	
Cooling	convection	
Spectral range	190 nm - 25 µm	
Connector	E-connector with EEPROM, Cable length 1.5m	
Dimensions [mm]	100 x 100 x 46	Ø 90, L: 28