



CA 2 Laboratory Thermopile

for the measurement of radiant fluxes

Sensitive to radiation from 0.2 to 50 μm

Field of view of 20°

Ideal for control or demonstrations

Introduction

The CA 2 laboratory thermopile can be used to measure the intensity of radiant fluxes in the wavelength range from 0.2 to 50 μm . The field of view is 20° for 90% of the received radiation and is determined by the cylindrical brass housing that contains a conical reflector. This is ideal to measure fluxes coming from a specific location or source.

CA 2 Laboratory Thermopile

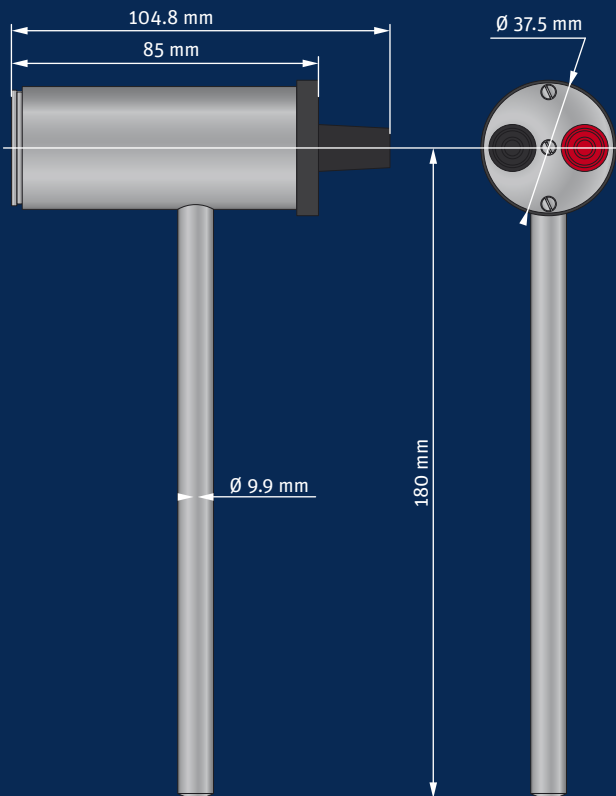
The CA 2 contains a thermopile detector that has a spectrally non-selective black coating. Therefore, the detector responds to the total power absorbed. The output signal is a voltage that is proportional to the radiation received.

Irradiance measurements are easily affected by convection and thermal radiation losses to the environment. The removable glass window reduces but restricts the spectral range to 0.3 to 3 μm .

Applications

The CA 2 laboratory thermopile is ideal for control purposes (such as ovens), demonstrations in schools and technical institutes or to be used for reference measurements in optical laboratories.

The mounting rod allows easy fixing to standard optical bench fixing clamps. The terminals allow simple connection of bare wires or 4 mm banana plugs.



Specifications	
Spectral range (without window)	0.2 to 50 μm
(with window)	0.35 to 2.8 μm
Sensitivity (Parallel beam on front window)	7 to 20 $\mu\text{V}/\text{W}/\text{m}^2$
Impedance	20 to 200 Ω
Expected output range (0 to 1500 W/m^2)	0 to 30 mV
Maximum operational irradiance	2000 W/m^2
Response time (63%)	< 6 s
Response time (95%)	< 18 s
Non-linearity (100 to 1000 W/m^2)	< 1.5 %
Field of view	20° (for 90 % of the received radiation)
Mounting rod	170 mm long x 10 mm \varnothing
Detector type	Thermopile
Operational temperature range	-40 °C to +80 °C
Storage temperature range	-40 °C to +80 °C
Humidity range	0 to 100 % non-condensing
Ingress Protection (IP) rating	For use in clean indoor conditions only



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