



Fast Response
Small Size

HEIMANN
Sensor
HEIMANN SENSOR GMBH

Datasheet Heimann Sensor Integrated Thermopile Module Lens Optics plus External Aperture Type „HTIA-G“

General information about HTIA sensor moduls are described in
“General Datasheet HTIA” .

Operating Conditions

Parameter	Typical Value	Unit	Condition
Supply voltage VDD	4.5 .. 5 .. 5.5	V	+Vs
Supply voltage VSS	0	V	-Vs , Ground
Supply current	1 .. 1.7 .. 2.2	mA	Without load
Output voltage range	0.3 .. VDD-0.3	V	
Start up time after POR	Max. 0.5	sec	Electrical start up
Output resistance	< 10	Ohm	F < 100Hz
Output load	> 20	kOhm	For optimal operation
Sensor absorbing area	0.6 x 0.6	mm ²	Type TP1
Object temperature range	-30 .. +1000	°C	Dep. on measuring conditions related adjustments
Sensor amplification	150 .. 5500		Output AOT
Response time sensor	5	msec	t/T = 63%
Temperature reference voltage at 25°C	1.225	V	output AOR
Sensitivity temperature reference	15 (10 .. 16)	mV/° C	Linear ; output AOR ; type “U” (type “C”)
Operating temperature	-20.. 120	°C	

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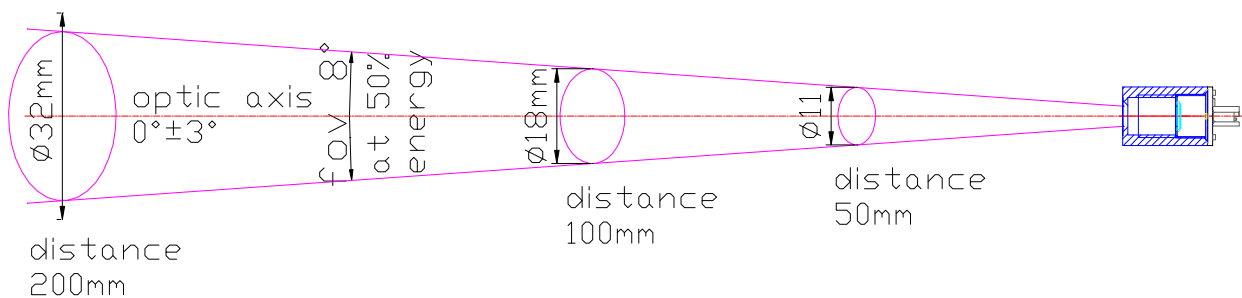


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Field of View - Data

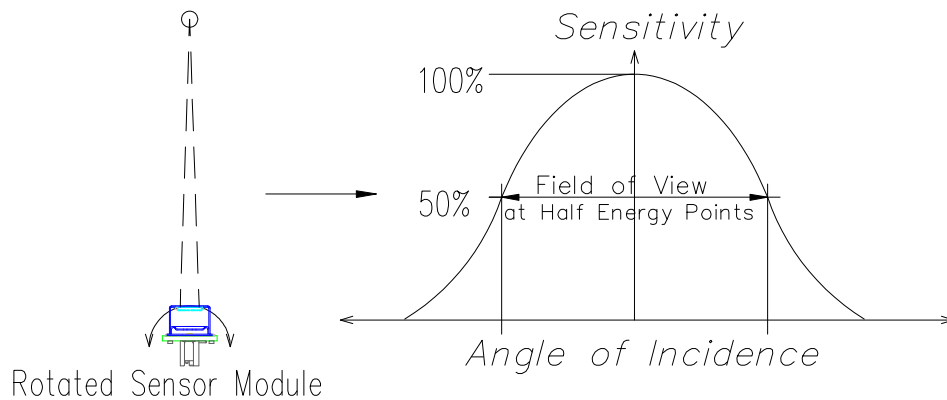
parameter	limits			unit	conditions
	Min	Typ	Max		
field of view	6	8	10	degree	50% energy points

Field of View - Drawing



Field of View – Definition and Test Procedure

Pulsed Point Radiation Source



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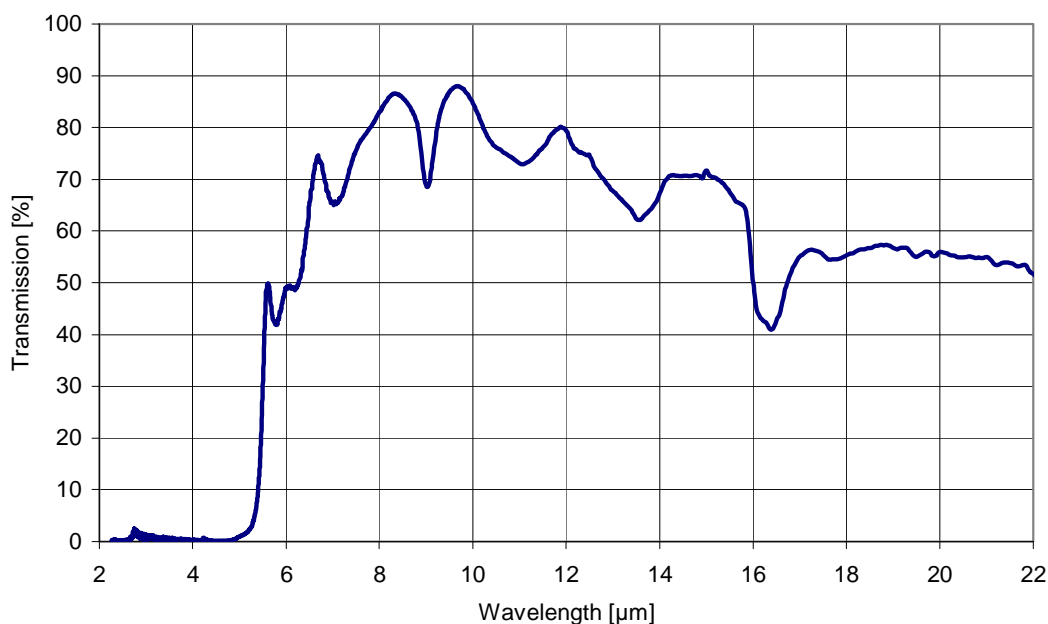
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Filter Specification

<i>parameter</i>	<i>minimum</i>	<i>typical</i>	<i>maximum</i>
Cut on wavelength	5.2µm	5.5µm	5.8µm
Average transmission from 7.5µm to 13.5µm	70%		
Average transmission from visual to 5µm			0.5%



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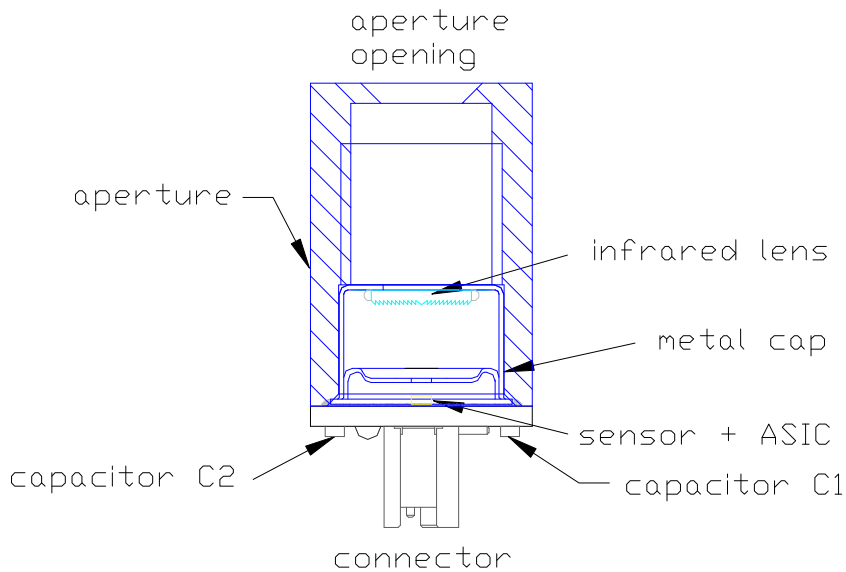


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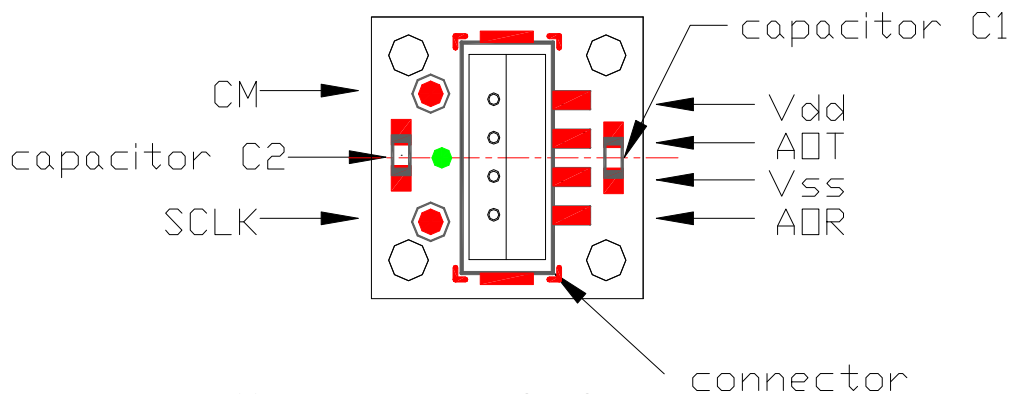


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Mounting Arrangement



Pin / Device Configuration



- Vdd : -> Positive supply voltage (+5V)
- Vss : -> Negative supply voltage (Ground, 0V)
- AOT: -> Analog sensor output voltage
- AOR: -> Analog temperature reference output
- CM, SCLK : -> Digital, programming, adjustments
- C1: -> optional capacitor connected to Vdd and Vss
- C2: -> optional capacitor for additional low pass filtering

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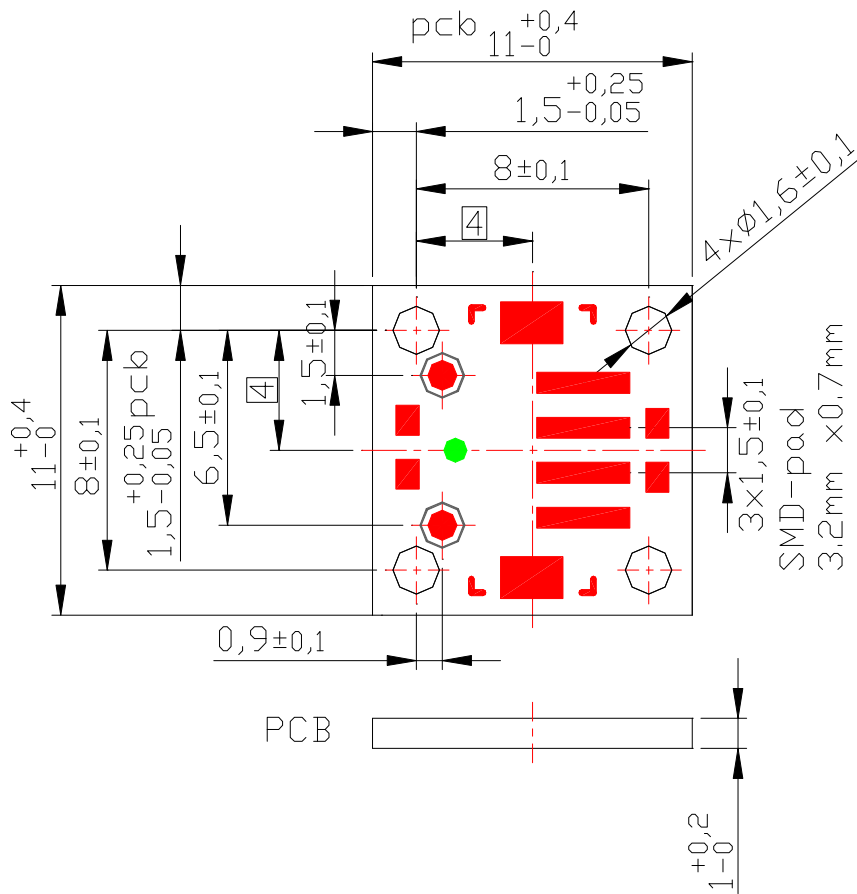


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Dimensional Drawing PCB 11x11



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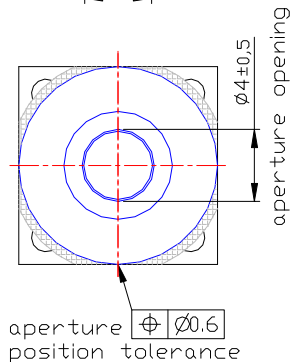
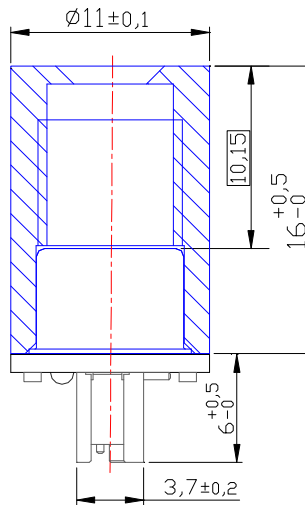
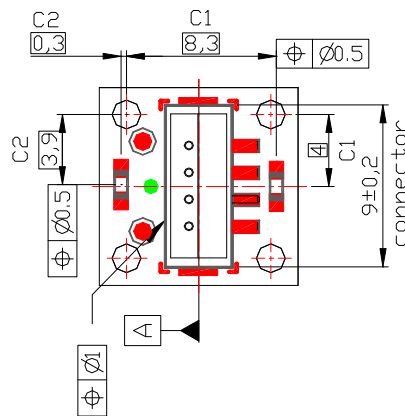


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Dimensional Drawing



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