



Fast Response
Small Size

HEIMANN
Sensor
HEIMANN SENSOR GMBH

Datasheet Heimann Sensor Integrated Thermopile Module Lens Optics Type „HTIA-E“

General information about HTIA models are described in
"Datasheet HEIMANN Sensor Integrated Module 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 .. +500	°C	Depending on application-oriented adjustments
Sensor amplification	150 .. 5500		Output AOT, Depending on application-oriented adjustm.
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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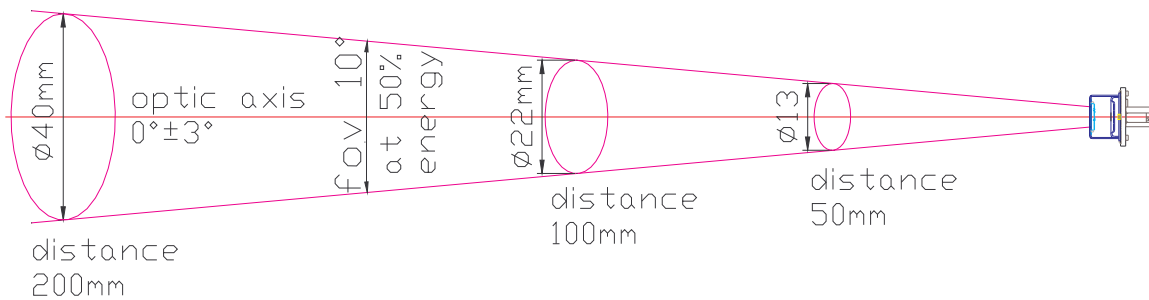


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Field of View - Data

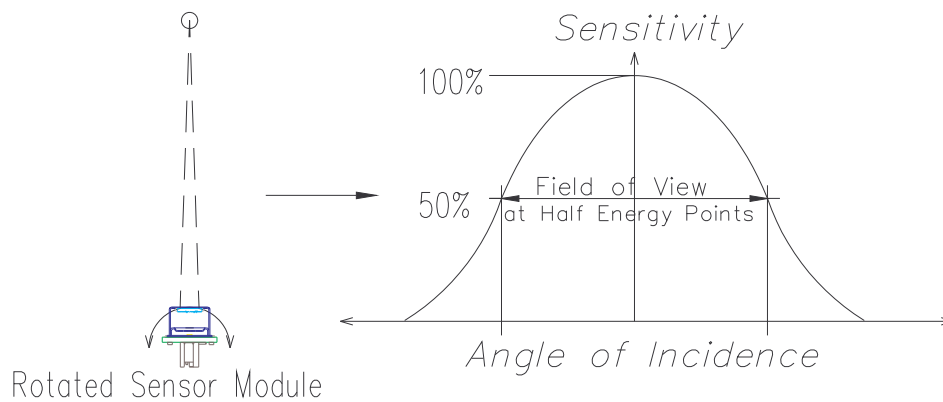
parameter	limits			unit	conditions
	Min	Typ	Max		
field of view	8	10	12	degree	50% energy points

Field of View - Drawing



Field of View – Definition and Test Procedure

Pulsed Point Radiation Source



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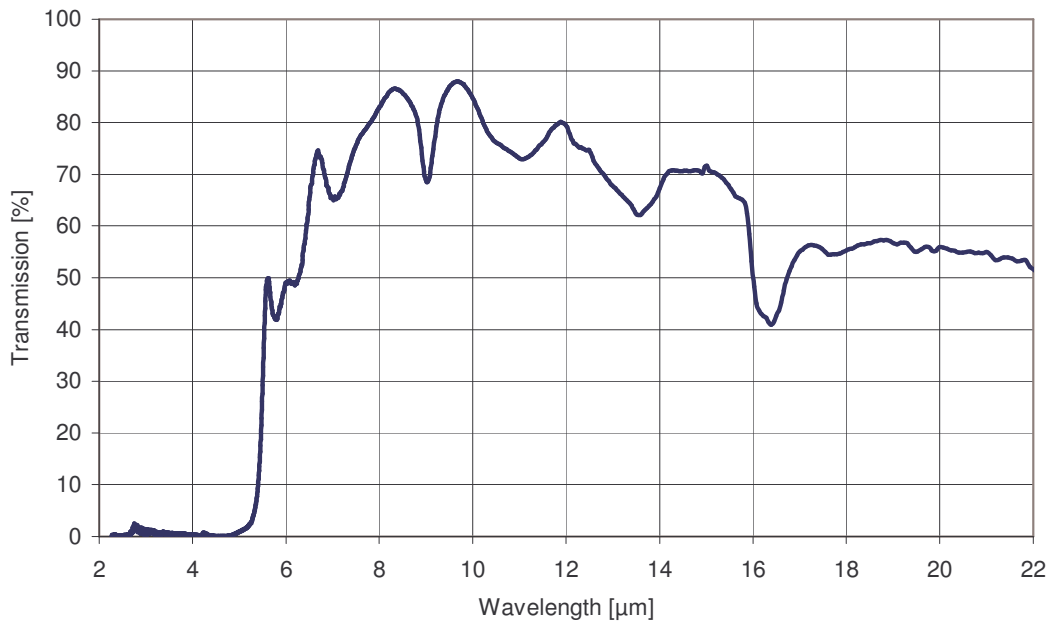


Datasheet Heimann Sensor Integrated Thermopile Module

Lens Optics Type „HTIA-E“

Lens Transmission Characteristics

<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%



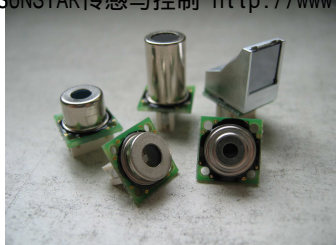
Liability

Changes or modifications at the product which haven't influence to the performance and/or quality of the device haven't to be announced to the customers in advance. Customers are requested to consult with Heimann Sensor representatives before the use of Heimann Sensor products in special applications where failure or abnormal operation may directly affect human lives or cause physical injury or property damage. The company or their representatives will not be responsible for damage arising from such use without prior approval.

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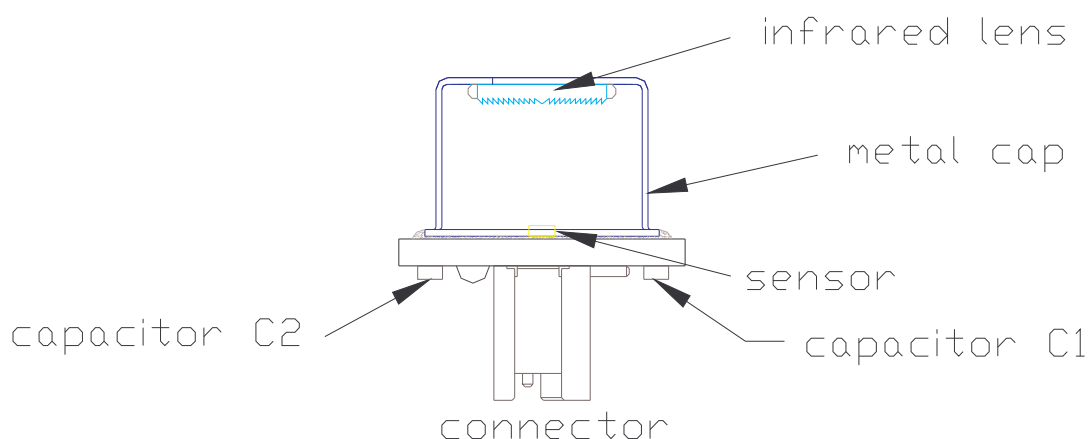


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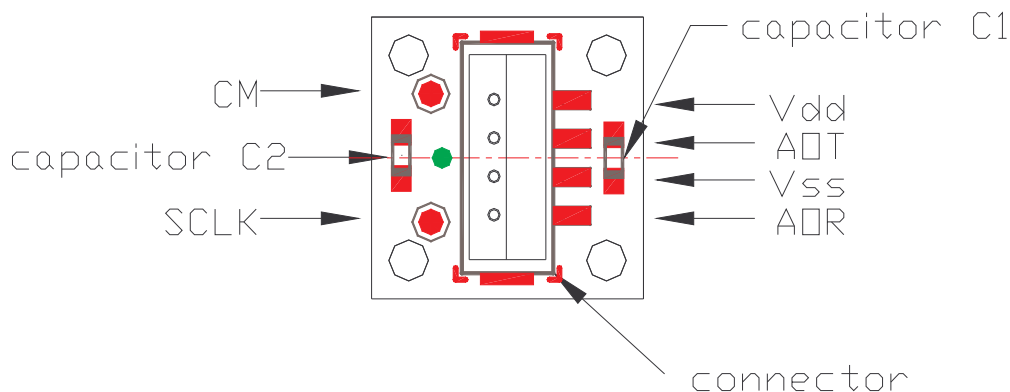


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Principal Components



Pin 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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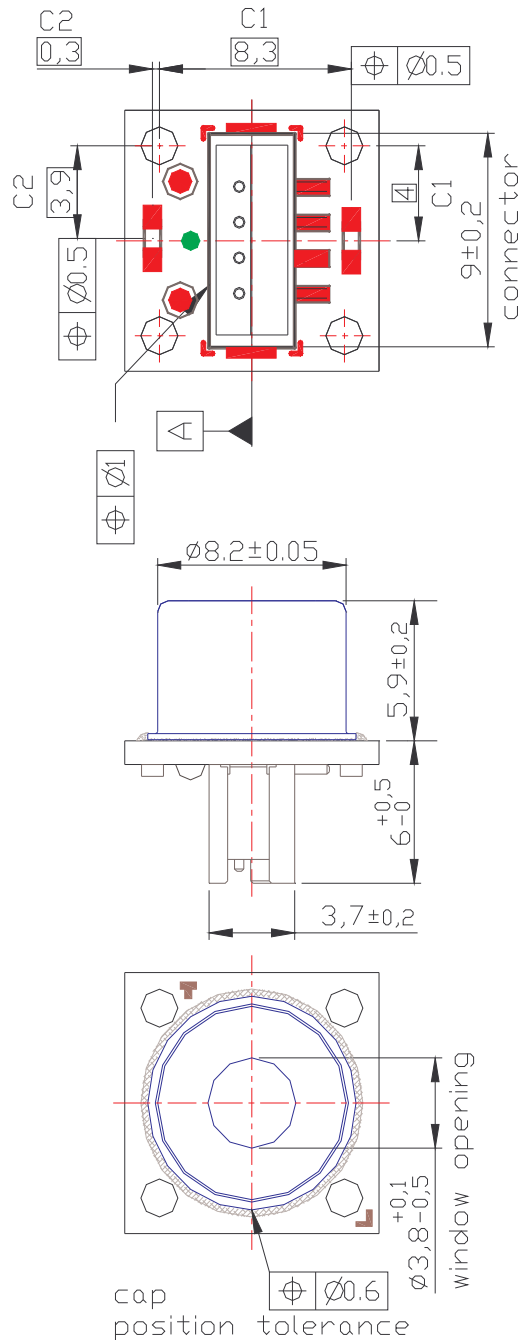


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Dimensional Drawing



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