



Datasheet HEIMANN Sensor Integrated Module TO-Case Type HIS-Lx-FL5.5-Tyyy

General information about HIS models are described in
"General Datasheet HIS" .

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.

Features

- Small size of standard TO39 package with 6 pins
- 5V version available
- 2 analog outputs for object and sensor temperature
- Low response time of 5ms
- Lens optics with 8:1 D:S ratio
- Absorber size 0.61mm x 0.61mm
- Lens optics focal length 5.5mm
- Adjustable object temperature range upto 300°C (calibration preset -> Tyyy)
- IR transmission 52 % within wavelength range 5.5µm to 13.5µm
- Internal compensated thermopile signal (type HIS-LC) available (-> general datasheet)

Ordering Information

HIS -> Heimann thermopile sensor and analogue ASIC in TO39 housing
 Lx -> „L“ cap TO39 for lens FL5.5; „U“ sensor signal not compensated ;
 „C“ sensor signal internal compensated
 FL5.5 -> lens type – silicon uncoated , focal length 5.5mm
 Tyyy -> object temperature upper limit

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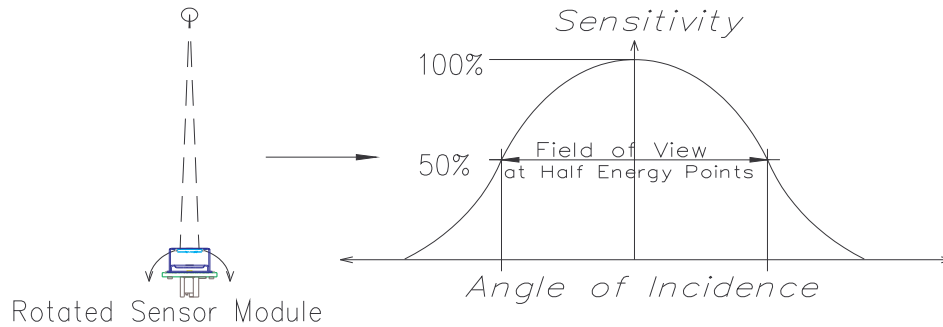
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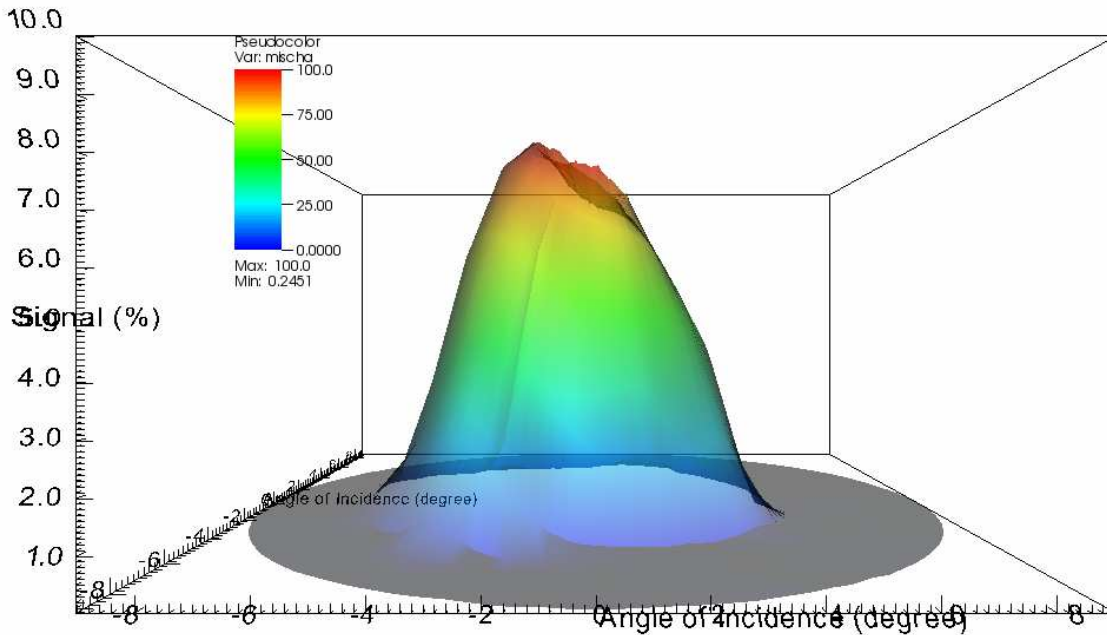
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Field of View – Definition and Sample Measurement

Pulsed Point Radiation Source



parameter	limits			unit	conditions
	Min	Typ	Max		
Optical axis		0		degree	Sensor view direction
Field of View		6		degree	50% energy points
D:S Ratio		8:1			Distance to spot size



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Specifications

<i>Parameter</i>	<i>Typical Value</i>	<i>Unit</i>	<i>Condition</i>
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
Sensor absorbing area	0.6 x 0.6	mm ²	Type TP1
Sensor amplification	150 .. 5500		Output AOT , preadjusted
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	

Pin / Device Configuration

<i>Pin No.</i>	<i>Symbol</i>	<i>Description</i>
1	VDD	Positive supply voltage (+5V)
2	VSS	Negative supply voltage / Ground (0V)
3	AOT	Amplified analog sensor output voltage
4	AOR	Analog temperature reference output voltage
5	SCLK	Adjustment mode only – serial clock input
6	CM	Adjustment mode only – programming mode selection

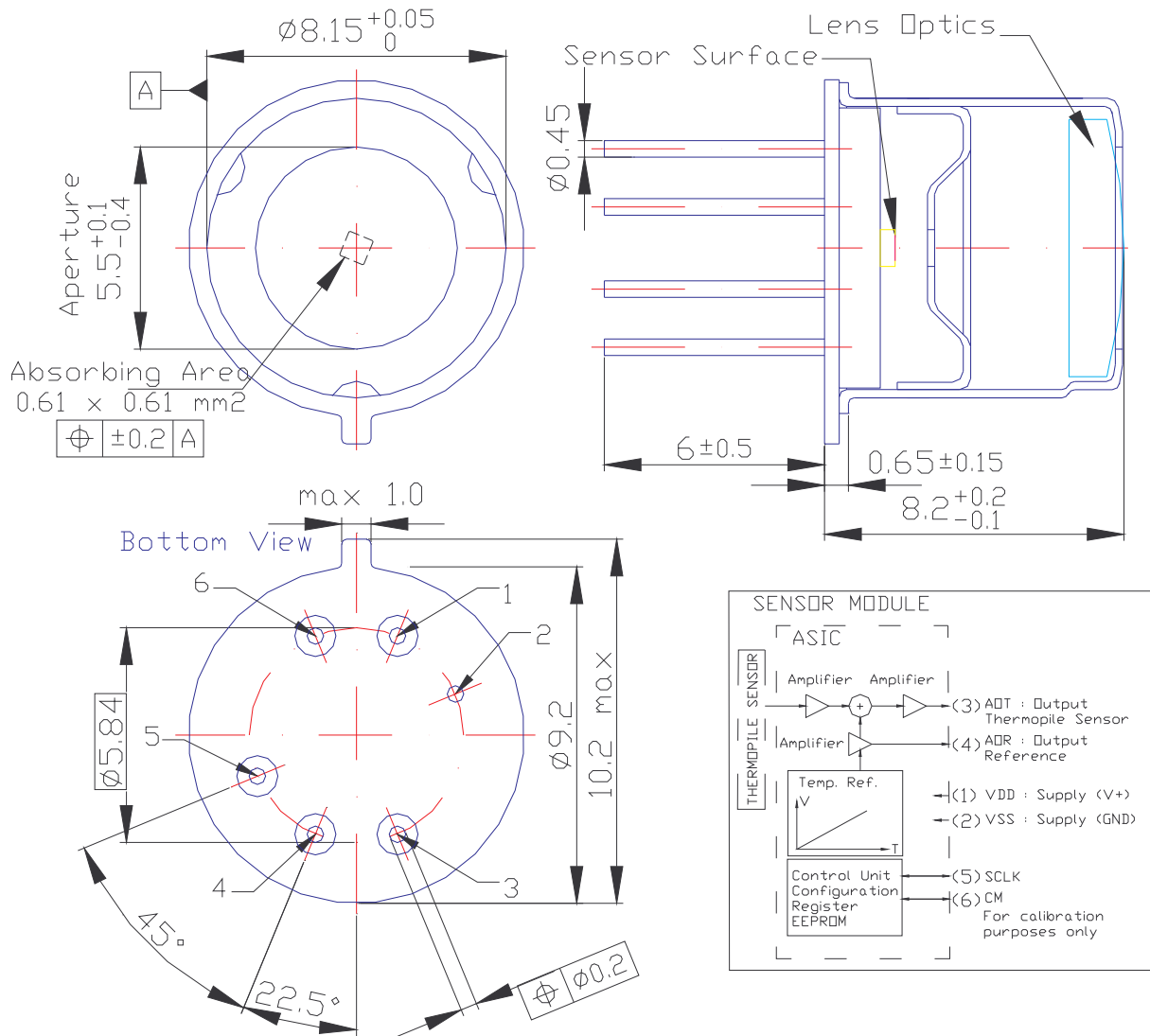
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Dimensions / Pin Assignment



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