

T H E R M O M E T R I C S
A C O M M I T M E N T T O E X C E L L E N C E

ZTP-148SRC1

Thermopile Infrared (IR) Sensor



Thermometrics Thermopile Infrared (IR) Sensors are used for non-contact surface, temperature measurement. The ZTP-148SRC1 Model consists of thermo-elements, flat infrared filter and thermistor for temperature compensation, all in one hermetically-sealed TO-46 (18) sensor package. There are a variety of filters available to maximize performance in specific applications.

Applications

- Ear thermometers
- Forehead thermometers
- Surface temperature measurement of the human body

Features

- Compact design
- High sensitivity
- Fast response time
- Low cost
- Included ambient temperature (thermistor) sensor

Amphenol
Advanced Sensors

ZTP-148SRC1 Specifications

Thermopile Chip

Parameter	Limits			Unit	Condition
	Min	Typ	Max		
Chip Size		1.8 X 1.8		mm ²	
Diaphragm		1.0 x 1.0		mm	
Active Area		0.7 X 0.7		mm ²	Absorber area
Internal Resistance	60	85	110	kΩ	@25°C
Resistance T.C.			0.12	%/°C	
Responsivity		54		V/W	500K, 1Hz,
Responsivity T.C.		-0.07		%/°C	
Noise Voltage		37		nW/Hz ^{1/2}	R.M.S, 25°C
NEP		0.69		nW/Hz ^{1/2}	
Detectivity		1.02		cmHz ^{1/2/W}	
Time Constant		32		ms	

NTC Thermistor for Temperature Compensation

Parameter	Limits			Unit	Condition
	Min	Typ	Max		
Resistance		100		kΩ	Tol.: ±3% @ 25°C
Beta – Value		3950		K	Tol.: ±% @ 25°C/50°C

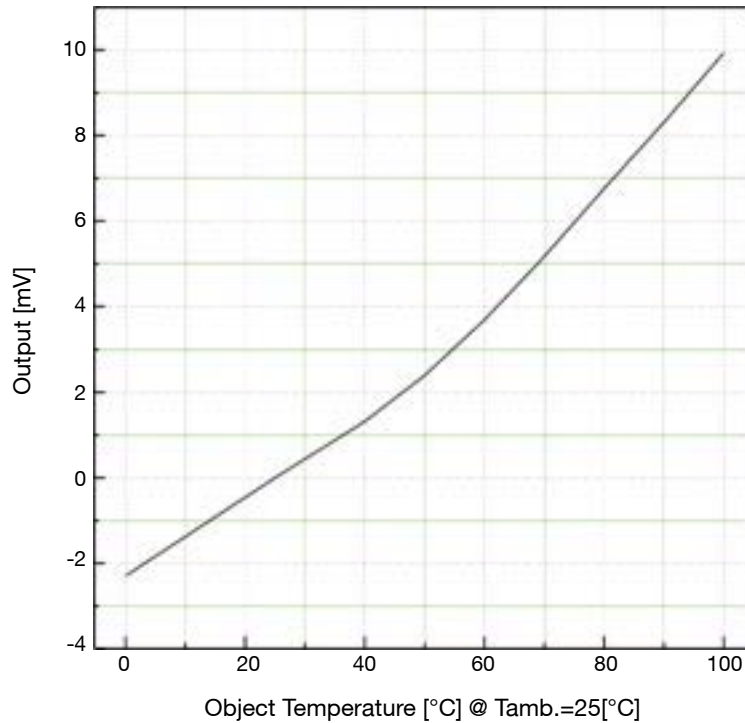
Absolute Maximum Ratings

- Operating Temperature : -20°C ~ 100°C
- Storage Temperature : -40°C ~ 120°C

ZTP-148SRC1 Specifications (Cont.)

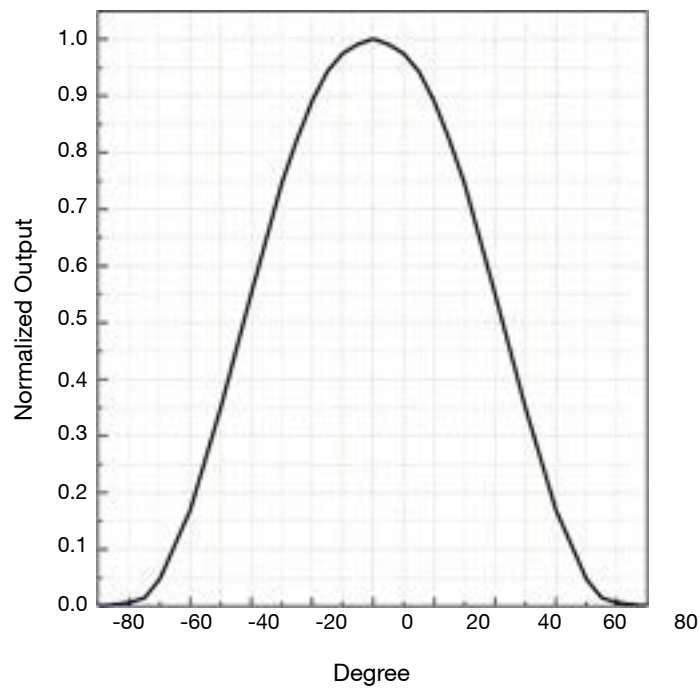
Typical Characteristic Data

Sensitivity



Field of View

Parameter	Limits			Units	Condition
	Min	Typ	Max		
Field of View	80	85	90	Degree	50% of Maximum Output

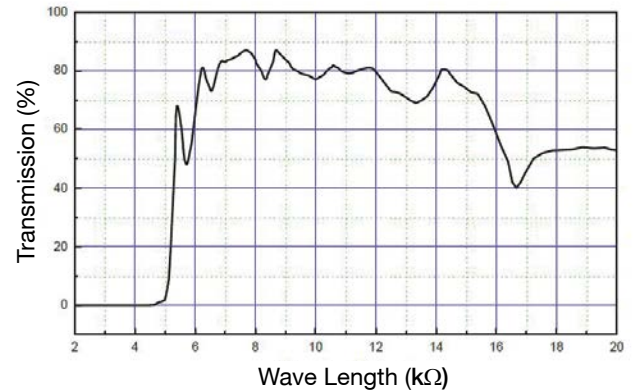


ZTP-148SRC1 Specifications (Cont.)

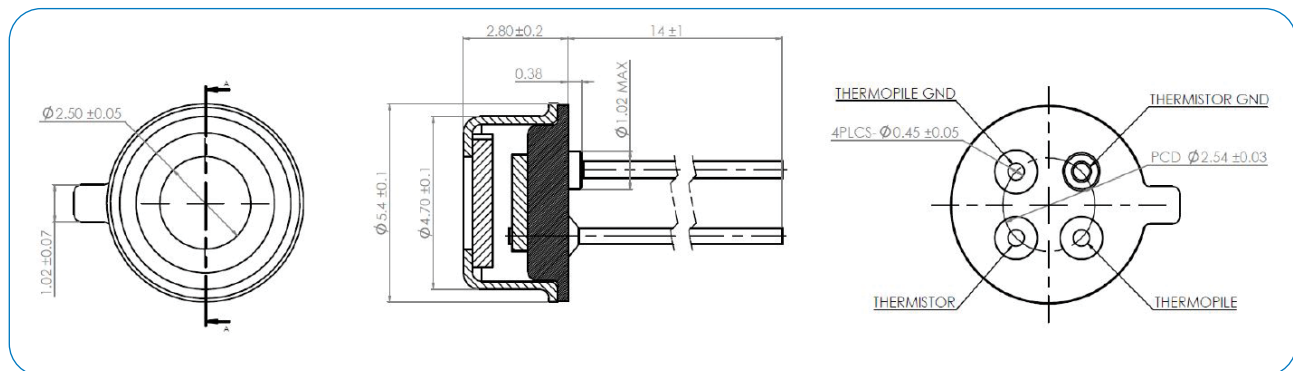
Thermistor Resistance

Temperature (°C)	Minimum Resistance (kΩ)	Typical Resistance (kΩ)	Maximum Resistance (kΩ)
-20	925.2	975.8	1028.2
-15	696.2	732.2	769.3
-10	528.9	554.7	581.2
-5	405.5	424.1	443.2
0	313.5	327.0	340.8
5	244.3	254.2	264.3
10	191.9	199.2	206.6
15	151.8	157.2	162.7
20	121.0	125.0	129.0
25	97.0	100.0	103.0
30	77.9	80.5	83.1
35	63.0	65.2	67.5
40	51.2	53.2	55.1
45	41.9	43.6	45.2
50	34.5	35.9	37.3
55	28.5	29.7	31.0
60	23.6	24.7	25.8
65	19.7	20.7	21.6
70	16.5	17.3	18.2
75	13.9	14.6	15.4
80	11.8	12.4	13.0
85	10.0	10.5	11.1
90	8.5	9.0	9.5
95	7.3	7.7	8.1
100	6.2	6.6	7.0

Transmission Data of Filter



Outline of Sensor Package and PIN Arrangement (unit : mm)



Amphenol
Advanced Sensors

www.amphenol-sensors.com

© 2020 Amphenol Corporation. All Rights Reserved. Specifications are subject to change without notice. Other company names and product names used in this document are the registered trademarks or trademarks of their respective owners.

AAS-920-773A - 07/2020

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Infrared Detectors](#) category:

Click to view products by [Amphenol](#) manufacturer:

Other Similar products are found below :

[HOA6517-001](#) [HOA6540-001](#) [HOA6542-001](#) [HOA6571-001](#) [HOA6572-001](#) [HOA6489-050](#) [HOA6531-001](#) [HOA6532-001](#) [HOA6546-001](#)
[HOA6570-001](#) [HOA6573-001](#) [HOA6536-001](#) [HOA6548-001](#) [HOA6544-001](#) [G-TPCO-035](#) [ZTP-135L](#) [ZTP-135BS](#) [ZTP-101T](#) [ZTP-115M](#)
[ZTP-115-Std](#) [ZTP-135](#) [ZTP-135SR](#) [ZTP-148SR](#) [ZTP-148SRC1](#) [USEQFCSA448100](#) [USEQFCSA500100](#) [USEQFCSA435100](#)
[USEQFCSA550100](#) [USEQFCSA455100](#) [USEQFCSA391100](#) [USEQFCSA338100](#) [IML-0687](#) [EPR44112](#) [EPR44212](#) [EPR44252](#) [ePR44282](#)
[EPY12111](#) [EPY12121](#) [EPY12211](#) [EPY12221](#) [EPY12231](#) [EPY12241](#) [EPY12251](#) [EPY12261](#) [EPY21114](#) [EPY22111](#) [EPY22114](#) [PY0234](#)
[PY0261](#) [PY0317](#)