Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

THERMOMETRICS
A COMMITMENT TO EXCELLENCE

ZTP-148SR

Thermopile IR Sensor

Thermometrics Thermopile IR Sensors are used for non-contact surface, or infrared, temperature measurement. The ZTP-148SR 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-148SR Specifications

Thermopile Chip

Parameter	Limits			Unit	Condition
	Min	Typ	Max		
Chip Size		1.8 X 1.8		mm^2	
Active Area		1.0×1.0		mm^2	Absorber area
Internal Resistance	60	85	111	kΩ	@25°C
Resistance T.C.			0.12	%/°C	
Responsivity	43	61	79	V/W	500K, 1Hz,
Responsivity T.C.		-0.07		%/°C	
Noise Voltage		37		nV rms	R.M.S, 25°C
NEP		0.61		$nW/Hz^{1/2}$	
Detectivity		1.14		$cmHz^{1/2}/W$	
Time Constant		32		ms	

NTC Thermistor for Temperature Compensation

Parameter	Limits			Unit	Condition
	Min	Typ	Max		
Resistance	97	100	103	kΩ	Tol.:3%, @ 25°C
Beta – Value	3920	3960	4000	K	Tol.:1%, Defined at 25°C/50°C

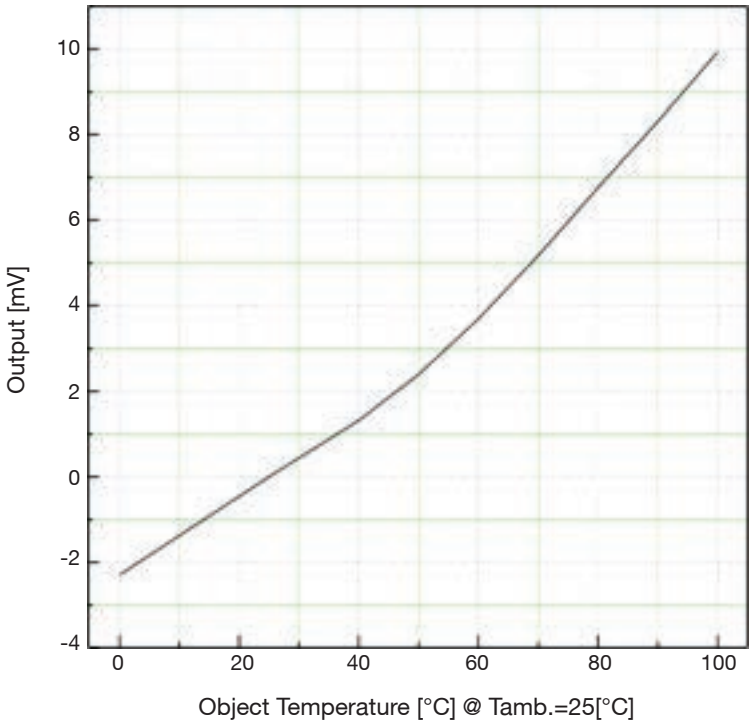
Absolute Maximum Ratings

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

ZTP-148SR Specifications

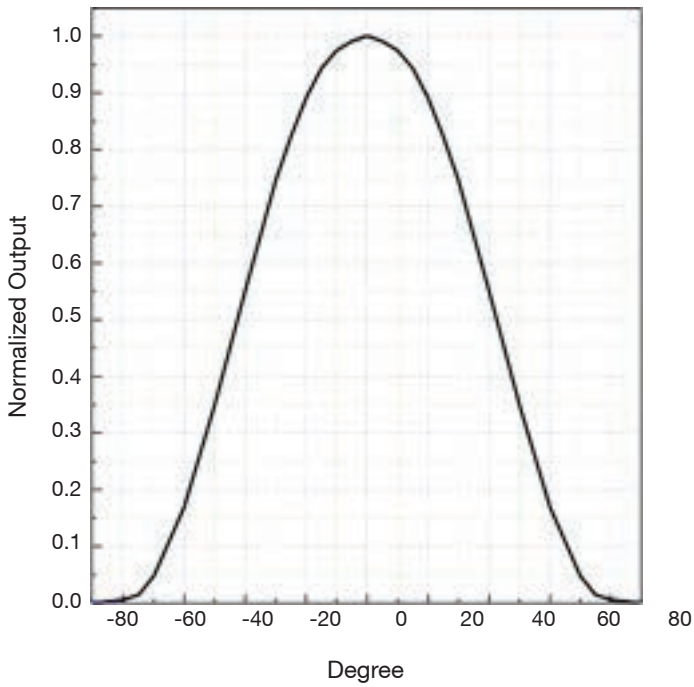
Typical Characteristic Data

Sensitivity



Field of View

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

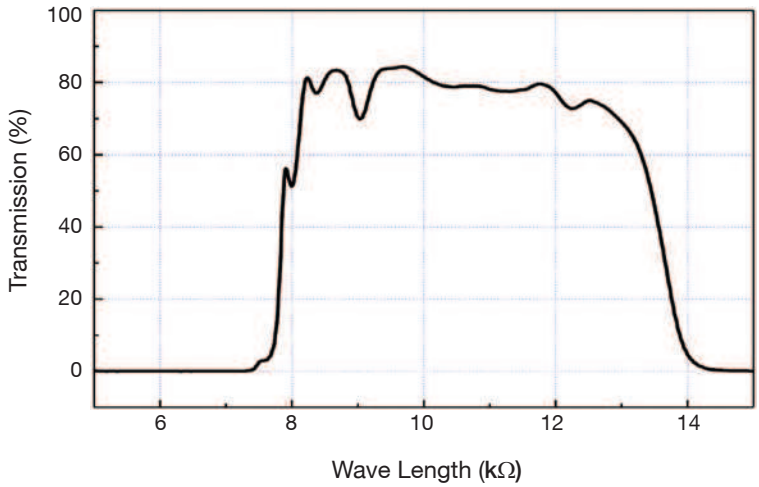


ZTP-148SR Specifications

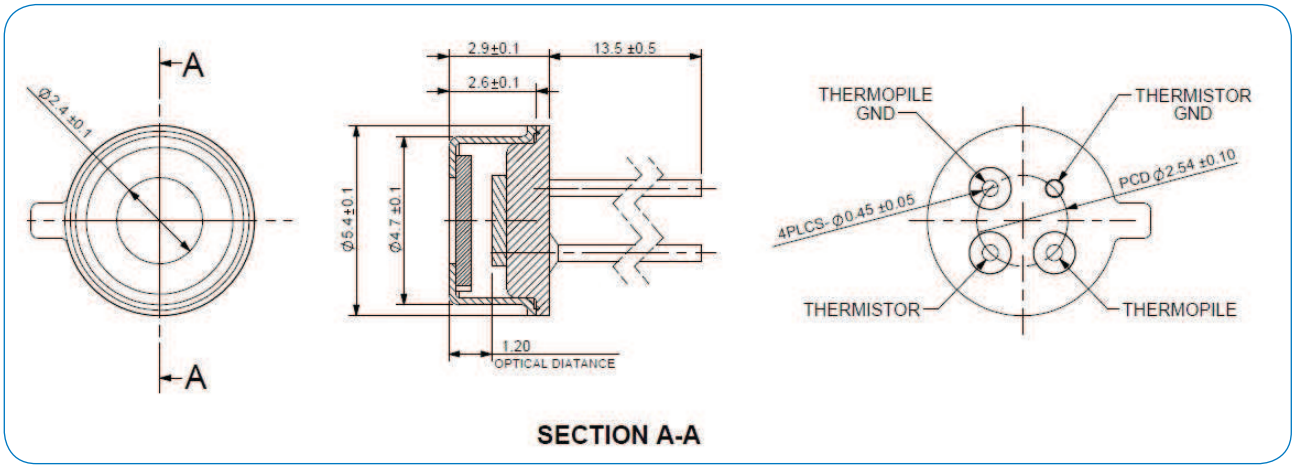
Thermistor Resistance

Tambient (kΩ)	Rmin (kΩ)	Rcent (kΩ)	Rmax (kΩ)
-20	893.8	942.3	992.6
-15	677.7	712.5	748.4
-10	518.2	543.3	569.2
-5	399.4	417.6	436.4
0	310.1	323.5	337.1
5	242.6	252.4	262.4
10	191.1	198.3	205.7
15	151.5	156.9	162.3
20	120.9	124.9	128.9
25	97.00	100.0	103.0
30	77.97	80.55	83.15
35	63.03	65.25	67.50
40	51.22	53.14	55.09
45	41.85	43.50	45.18
50	34.36	35.79	37.24
55	28.35	29.58	30.84
60	23.49	24.56	25.66
65	19.56	20.49	21.44
70	16.35	17.16	17.99
75	13.73	14.43	15.15
80	11.57	12.18	12.81
85	9.79	10.32	10.88
90	8.313	8.781	9.267
95	7.085	7.495	7.923
100	6.058	6.420	6.796

Transmission Data of Filter



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



Amphenol

Advanced Sensors

www.amphenol-sensors.com