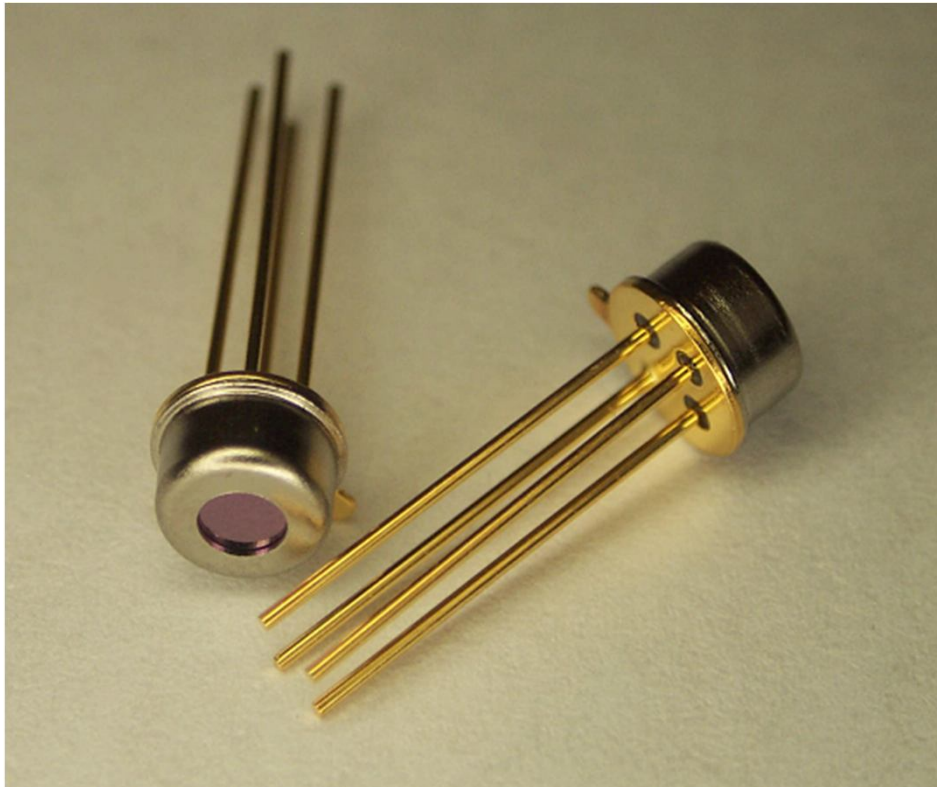


Aolittel Technology

SPECIFICATION of THERMOPILE IR SENSOR



PRODUCT NAME :		ZTP-148SR	
PART NO. :		DR.	DATE 11. Jan. 2011
CUSTOMER :		CK.	DATE
RELEASED DATE : 11. Jan. 2011		CK.	DATE
REV. CODE : 00	REV. DATE : 11. Jan. 2011	APPR.	DATE 11. Jan. 2011

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1. FEATURE OF ZTP-148SR

1.1 THERMOPILE CHIP

PARAMETER	LIMITS			Units	CONDITION
	Min	Typ	Max		
Chip Size	1.8 X 1.8			mm ²	
Diaphragm Size	1.0 X 1.0			mm ²	
Active Area	0.7 X 0.7			mm ²	
Internal Resistance	60	85	111	k Ω	25 $^{\circ}$ C
Resistance T.C			0.12	%/ $^{\circ}$ C	
Responsivity	43	61	79	V/W	500K, 1Hz
Responsivity T.C		-0.07		%/ $^{\circ}$ C	
Noise Voltage		37		nV rms	R.M.S, 25 $^{\circ}$ C
NEP		0.61		nW/Hz ^{1/2}	500K, 1Hz
Detectivity		1.14		cmHz ^{1/2} /W	500K, 1Hz
Time Constant		32		ms	

1.2 THERMISTOR

- Thermistor for Temperature Compensation

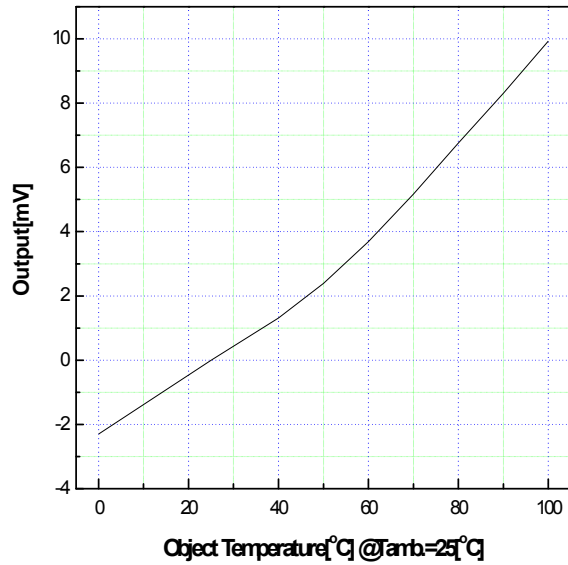
Parameter	LIMITS			Units	Condition
	Min	Typ	Max		
Resistance	97	100	103	k Ω	Tol.:3%, @ 25 $^{\circ}$ C
Beta – Value	3920	3960	4000	K	Tol.:1%, Defined at 25 $^{\circ}$ C/50 $^{\circ}$ C

1.3 ABSOLUTE MAXIMUM RATINGS

- Operating Temperature : -20 $^{\circ}$ C ~ 100 $^{\circ}$ C
- Storage Temperature : -40 $^{\circ}$ C ~ 120 $^{\circ}$ C

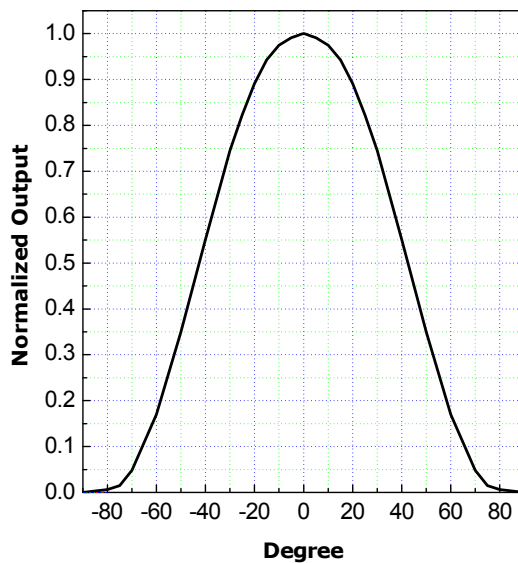
2. TYPICAL CHARACTERISTIC DATA OF ZTP-148SR

2.1 SENSITIVITY



2.2 FIELD OF VIEW

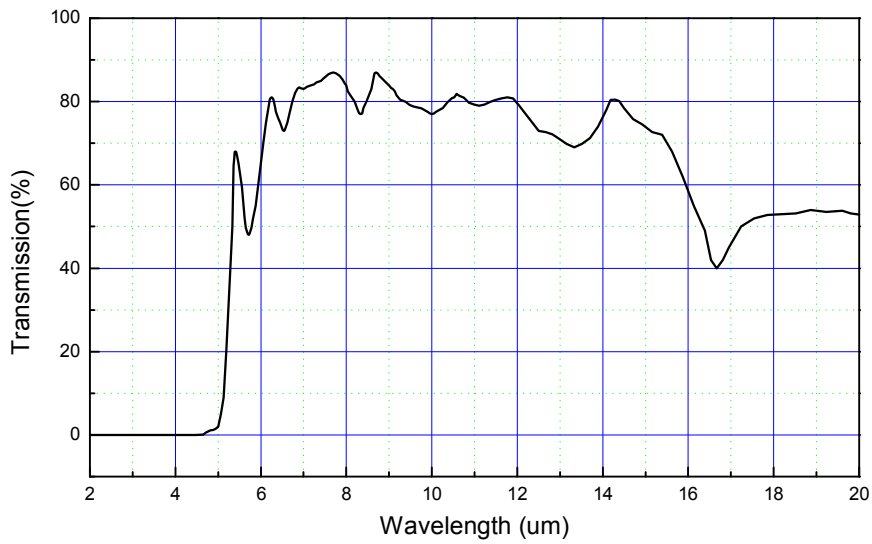
Parameter	LIMITS			Units	Condition
	Min	Typ	Max		
Field of View	80	85	90	Degree	50% of Maximum Output



2.3 THERMISTOR RESISTANCE (R-T TABLE)

Tambient(°C)	Rmin(kΩ)	Rcent(kΩ)	Rmax(kΩ)
-20	909.1	947.9	987.3
-15	687.7	715.9	744.7
-10	524.5	545.4	566.5
-5	403.3	418.8	434.5
0	312.6	324.1	335.8
5	244.0	252.7	261.5
10	191.8	198.5	205.1
15	151.9	156.9	162.0
20	121.0	124.9	128.8
25	97.00	100.0	103.0
30	78.05	80.55	83.06
35	63.16	65.25	67.36
40	51.39	53.15	54.91
45	42.03	43.51	45.00
50	34.54	35.79	37.05
55	28.52	29.58	30.65
60	23.65	24.55	25.47
65	19.70	20.47	21.25
70	16.48	17.14	17.81
75	13.83	14.40	14.98
80	11.66	12.15	12.65
85	9.867	10.29	10.72
90	8.380	8.745	9.118
95	7.143	7.460	7.785
100	6.111	6.388	6.670

2.4 TRANSMISSION DATA OF FILTER



3. OUTLINE OF SENSOR PACKAGE and PIN ARRANGEMENT [unit:mm]

