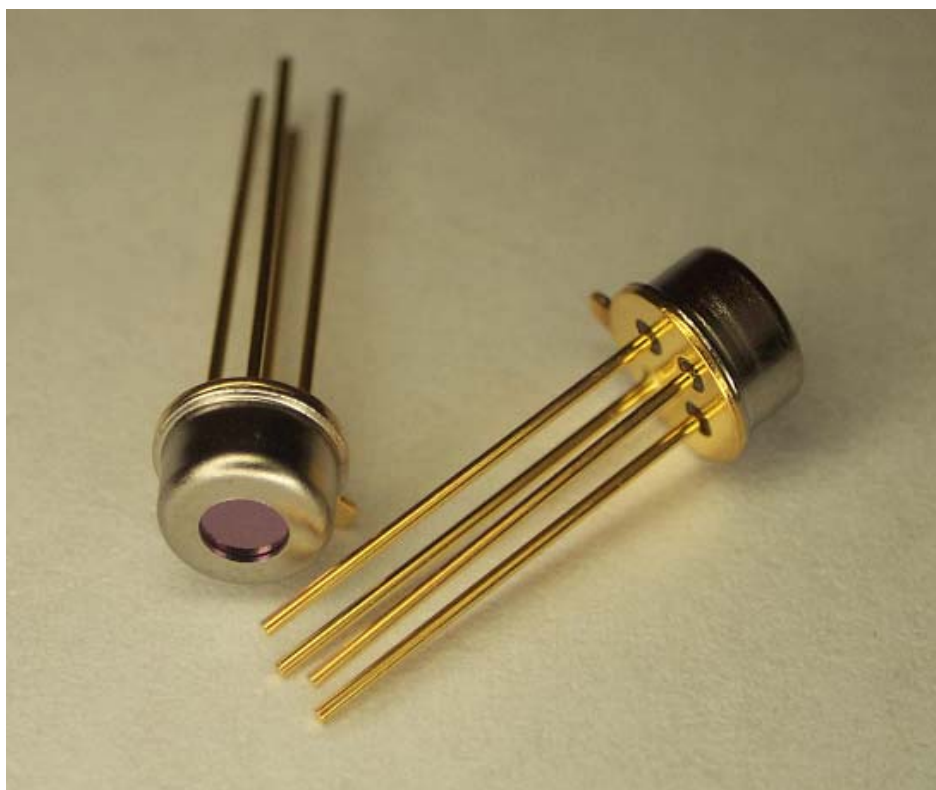




# GE Industrial Sensing

## SPECIFICATION of THERMOPILE IR SENSOR



PRODUCT NAME : ZTP-135SR		GE Industrial Sensing	
PART NO. : 218001	DR.	Kyurull.Jang	DATE 20. July. 2005
CUSTOMER :	CK.		DATE
RELEASED DATE :	CK.		DATE
REV. CODE : 02	REV. DATE : 20.July.2005	APPR.	DATE 20. July. 2005
		Youngcho.Shim	

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## 1. FEATURE OF ZTP-135SR

### 1.1 THERMOPILE CHIP

PARAMETER	LIMITS			Units	CONDITION
	Min	Typ	Max		
Chip Size	1.8 X 1.8			mm <sup>2</sup>	
Diaphragm Size	1.4 X 1.4			mm <sup>2</sup>	
Active Area	0.7 X 0.7			mm <sup>2</sup>	
Internal Resistance	42	60	78	k $\Omega$	25°C
Resistance T.C			0.12	%/°C	
Responsivity	43	62	81	V/W	500K, 1Hz
Responsivity T.C		-0.10		%/°C	
Noise Voltage		32		nV rms	R.M.S, 25°C
NEP		0.51		nW/Hz <sup>1/2</sup>	500K, 1Hz
Detectivity		1.35 E08		cmHz <sup>1/2</sup> /W	500K, 1Hz
Time Constant		25		ms	

### 1.2 THERMISTOR

- Thermistor for Temperature Compensation

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

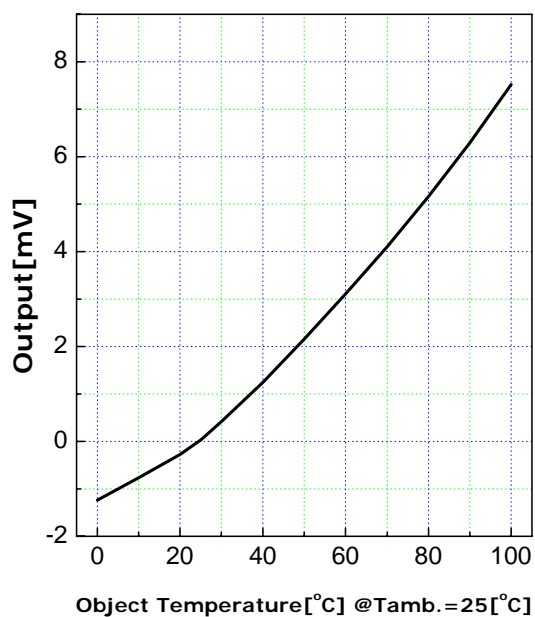
### 1.3 ABSOLUTE MAXIMUM RATINGS

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

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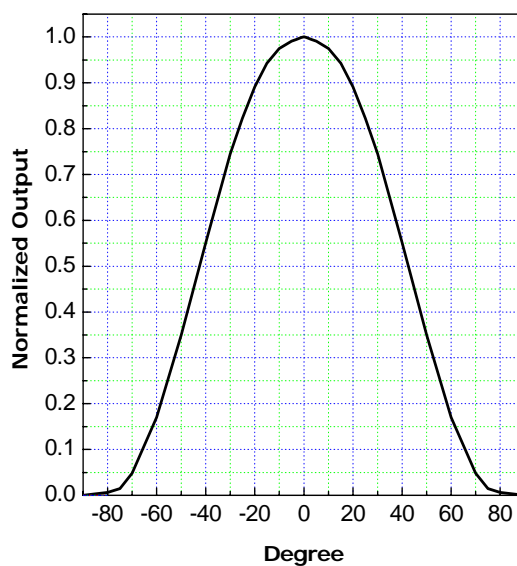
## 2. TYPICAL CHARACTERISTIC DATA OF ZTP-135SR

### 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



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## 2.3 THERMISTOR RESISTANCE (R-T TABLE)

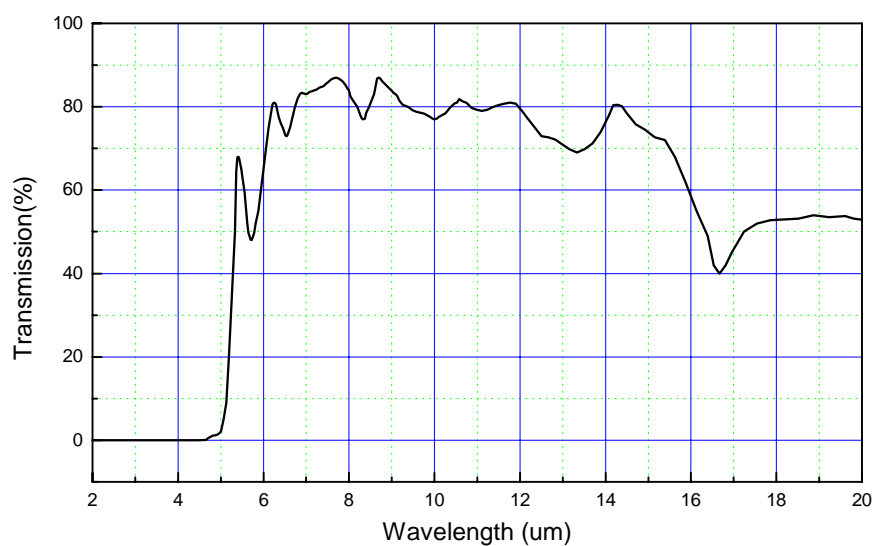
Tambient(°C)	Rmin(kΩ)	Rcent(kΩ)	Rmax(kΩ)
-20	909.1	947.9	987.3
-15	687.7	715.9	744.7
-10	524.5	545.4	566.5
-5	403.3	418.8	434.5
0	312.6	324.1	335.8
5	244.0	252.7	261.5
10	191.8	198.5	205.1
15	151.9	156.9	162.0
20	121.0	124.9	128.8
25	97.00	100.0	103.0
30	78.05	80.55	83.06
35	63.16	65.25	67.36
40	51.39	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

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## 2.4 TRANSMISSION DATA OF FILTER



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

