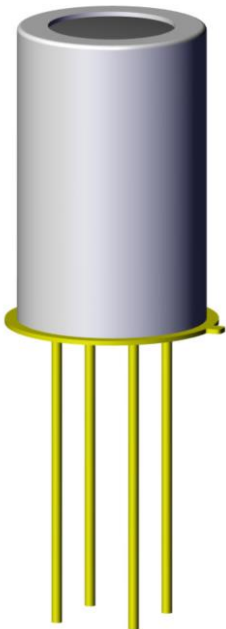


Thermopile Temperature Sensor

MTP10-A6L10.6



Specification:

- MEMS Thermopile Element
- TO-39 Package
- High Sensitivity
- Silicon Lens
- High Accuracy NTC
- DS Ratio 10:1

Application:

- Non-contact Temperature Measurements
- Continuous Temperature Control of Manufacturing
- For industrial remote temperature measurement

Model No.: MTP10-A6L10.6

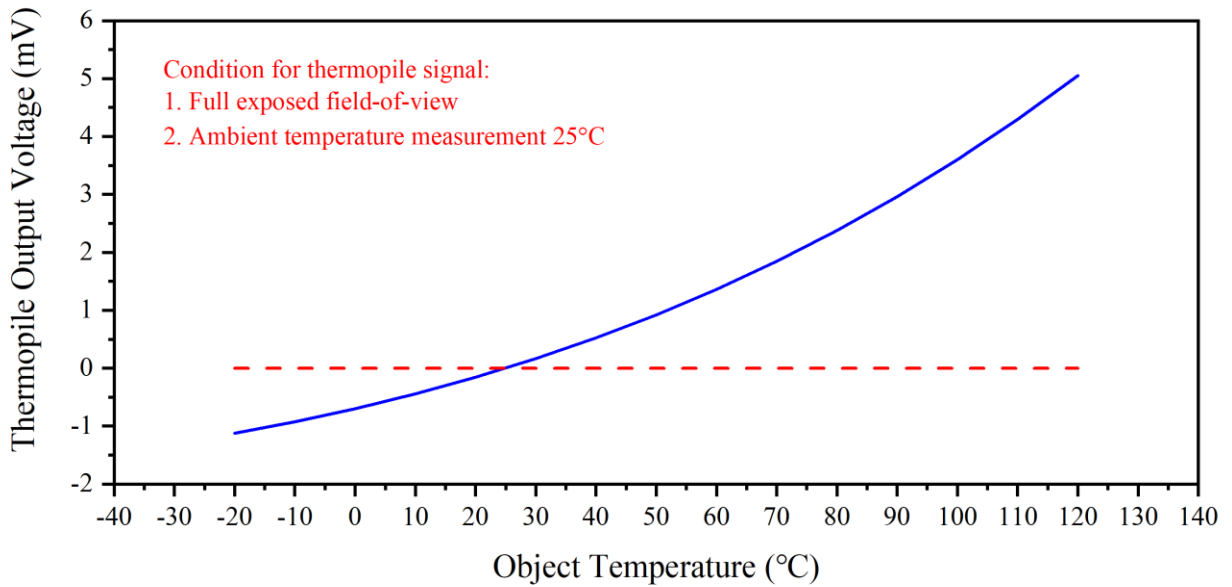
Absolute Maximum Rating

Parameter	Value	Unit
Operating Temperature	-30~100	°C
Storage Temperature	-40~125	°C

Performance Specification

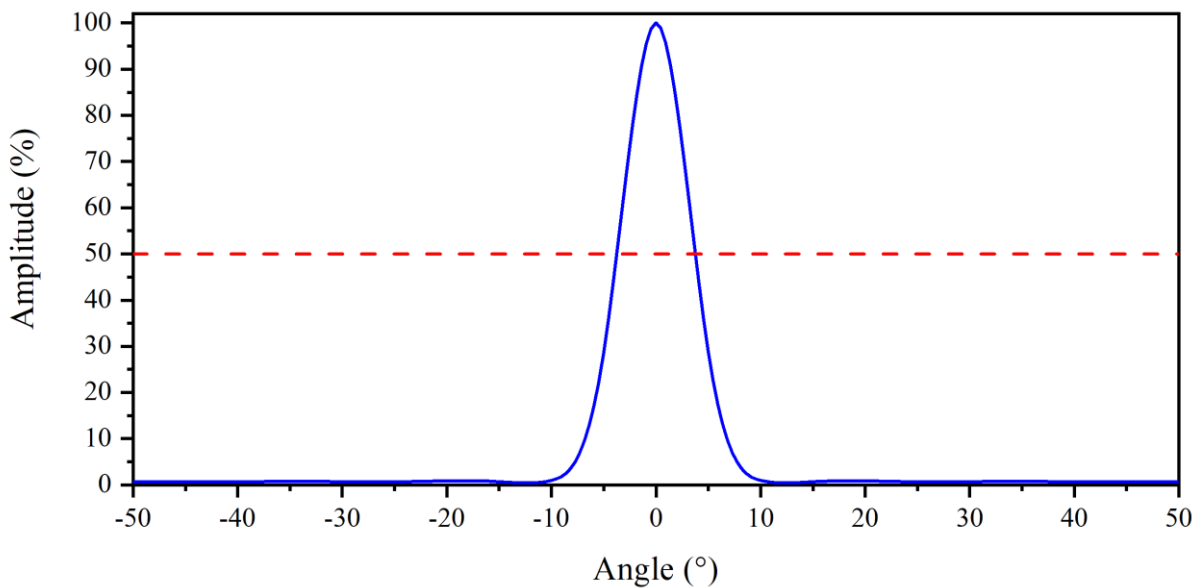
Parameter	Value	Unit	Conditions
Chip Size	1.8*1.8	mm ²	
Sensitive Area	1.35*1.35	mm ²	
Field of View	7	°	at 50 % intensity points
Thermopile Resistance	43 ± 10%	kΩ	Temp=25°C
Noise Voltage	27 ± 2	nV/Hz ^{1/2}	Temp=25°C
NEP	0.62	nW/Hz ^{1/2}	500K,1Hz
Responsivity	43	V/W	500K,5.5um(LWP)
Temp Coefficient of Resistance	0.1	%/°C	25°C/50°C
Time Constant	32	ms	
Specific Detectivity	6.8E+07	cmHz ^{1/2} /W	500K,1Hz
Thermistor Resistance	100 ± 3%	kΩ	25°C
Thermistor BETA-Value	3950 ± 1%	K	25°C/50°C

Typical Performance Curve



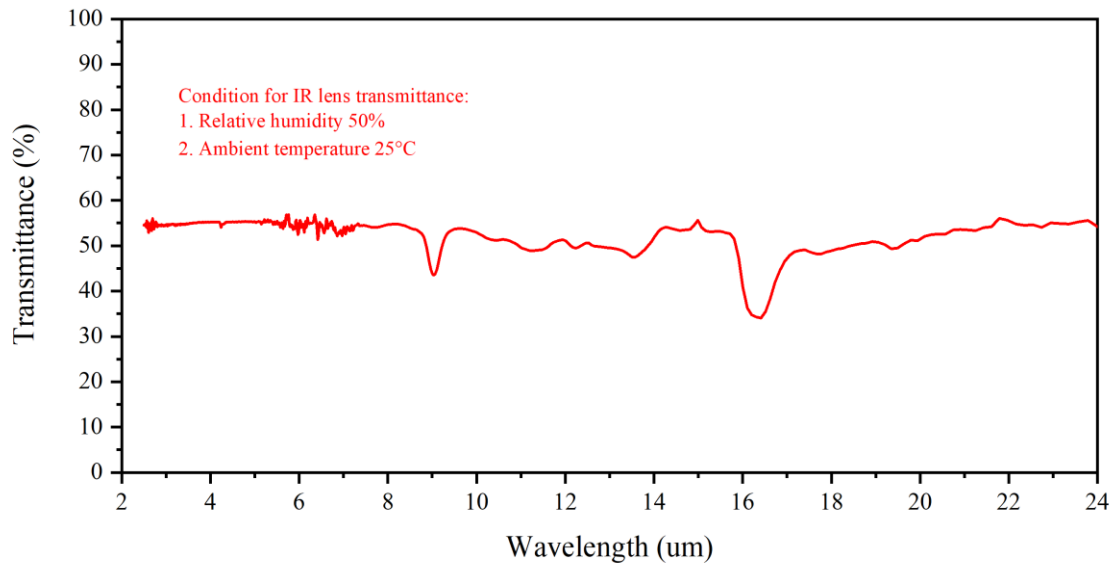
Optical Characteristic

Parameter	Value	Unit	Description
Field of View	7	°	50% Maximum Signal

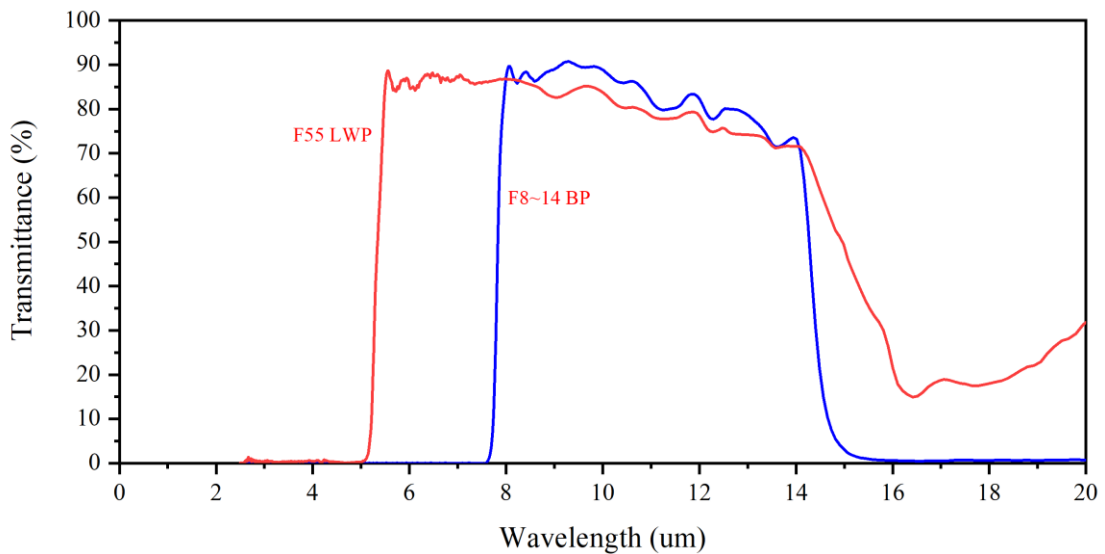


Filter Specification

Parameter	Value	Unit	Description
Focal Length	10.6	mm	Silicon Uncoated
Transmission	50	%	5.5~14um



Available Coating



Resistance vs. Temperature Table of NTC

T (°C)	R (kΩ)	T (°C)	R (kΩ)	T (°C)	R (kΩ)
-20	953.19	20	124.91	60	24.701
-19	900.37	21	119.41	61	23.821
-18	850.79	22	114.19	62	22.976
-17	804.21	23	109.22	63	22.166
-16	760.45	24	104.50	64	21.388
-15	719.32	25	100.00	65	20.641
-14	680.64	26	95.72	66	19.923
-13	644.27	27	91.65	67	19.234
-12	610.04	28	87.77	68	18.572
-11	577.82	29	84.07	69	17.936
-10	547.48	30	80.55	70	17.325
-9	518.90	31	77.20	71	16.738
-8	491.98	32	74.00	72	16.173
-7	466.60	33	70.95	73	15.630
-6	442.67	34	68.04	74	15.108
-5	420.11	35	65.265	75	14.605
-4	398.81	36	62.618	76	14.122
-3	378.72	37	60.092	77	13.657
-2	359.74	38	57.681	78	13.209
-1	341.83	39	55.379	79	12.779
0	324.90	40	53.180	80	12.364
1	308.90	41	51.080	81	11.965
2	293.78	42	49.073	82	11.580
3	279.48	43	47.155	83	11.210
4	265.96	44	45.321	84	10.853
5	253.16	45	43.569	85	10.509
6	241.05	46	41.892	86	10.177
7	229.58	47	40.289	87	9.858
8	218.72	48	38.755	88	9.550
9	208.44	49	37.286	89	9.253
10	198.69	50	35.881	90	8.967
11	189.45	51	34.536	91	8.691
12	180.69	52	33.248	92	8.424
13	172.38	53	32.014	93	8.167
14	164.50	54	30.832	94	7.919
15	157.02	55	29.699	95	7.680
16	149.91	56	28.614	96	7.449
17	143.17	57	27.573	97	7.226
18	136.77	58	26.576	98	7.010
19	130.69	59	25.619	99	6.802
				100	6.601

Electrical Connection

Pin	1	2	3	4
Define	TP+	NTC+	TP-	GND

Mechanical Dimension

