

Unitra Korea Inc.

PART No. : 19163 - 101 - tp001

Date : Jan. 26, 1999

SPECIFICATION
of THERMOPILE IR SENSOR
(LGTP-101)
(M0004S-05)



LG Corporate Institute of Technology



MEMTEK



1. Features of LGTP-101

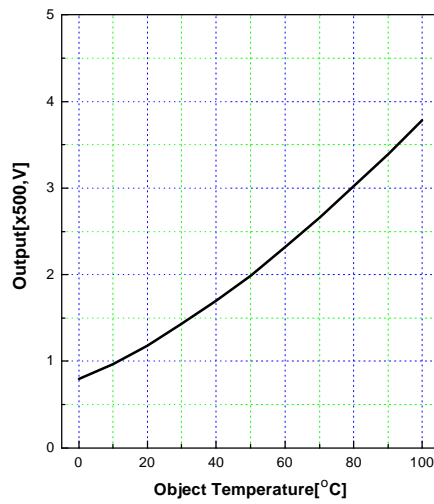
- Chp Size : 3.0 x 3.0 mm²
- Diaphragm Size : 1.5 x 1.5 mm²
- Number of Couples : 36couples
- Active Area : 0.51 x 0.51mm²
- Internal Resistance : 220 (+/-) 20 Kohm
- Resistance T.C. : < 0.10 %/ °C
- Responsivity : 110 (+/-) 10V/W
- Noise Voltage : 60 ~ 63 nV rms (@1Hz)
- NEP : 0.5 ~ 0.7 nW/ Hz^{1/2}
- Detectivity : 0.8 ~ 1.0E08 cmHz^{1/2}/W
- Time Constant : 22 ms @1Hz, 500K (Typical)
 - Thermistor for Temperature Compensation
 - R=10Kohm @25 °C(R-Tol.=(+/-) 1%)
 - Beta=3970 (Beta-Tol.=(+/-) 0.5%)
- Package Type : TO-5
- Operating Temperature : -20 ~ 80 °C
- Storage Temperature : -40 ~ 100 °C



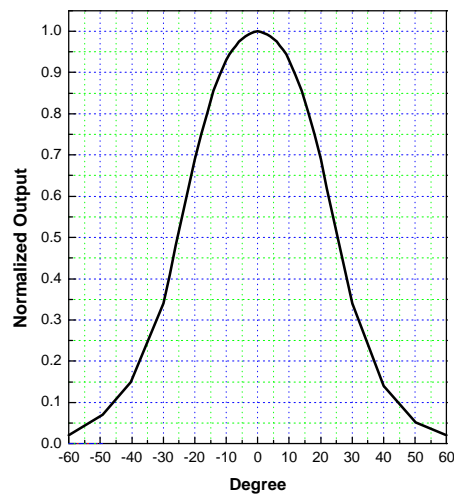


2. Typical Characteristic Data of LGTP-101

(1) Sensitivity

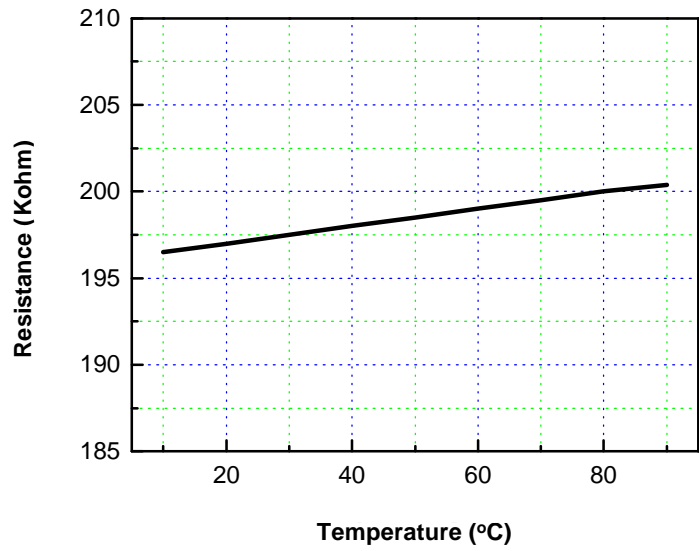


(2) Directivity

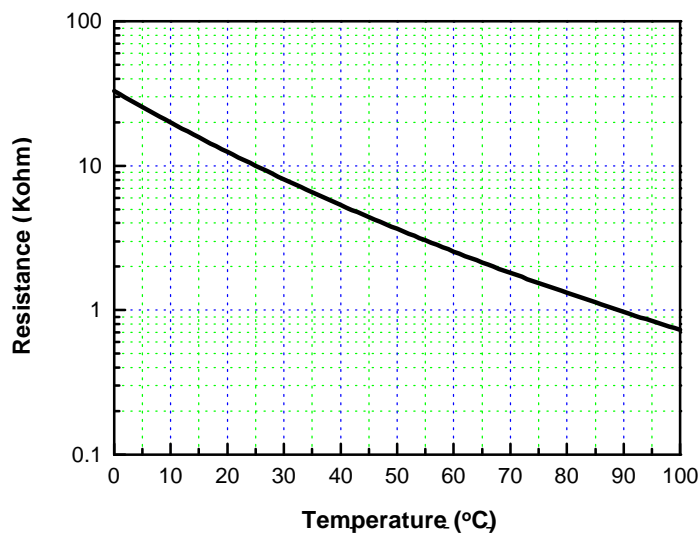




(3) Internal Resistance of Thermopile - Ambient Temperature

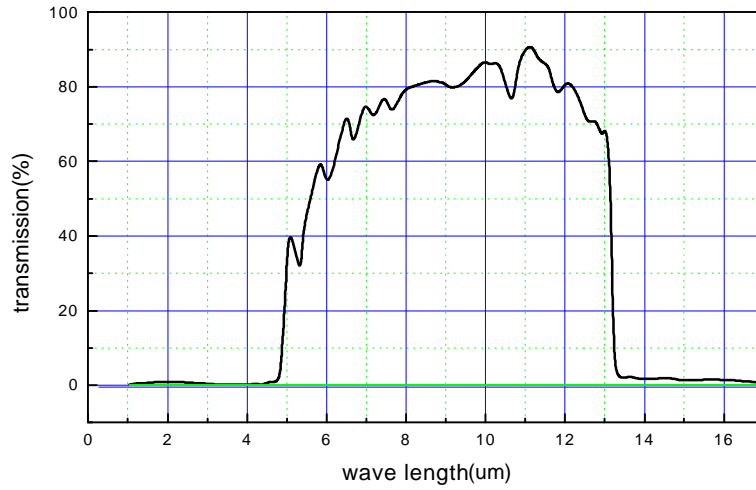


(4) Thermistor Resistance - Ambient Temperature



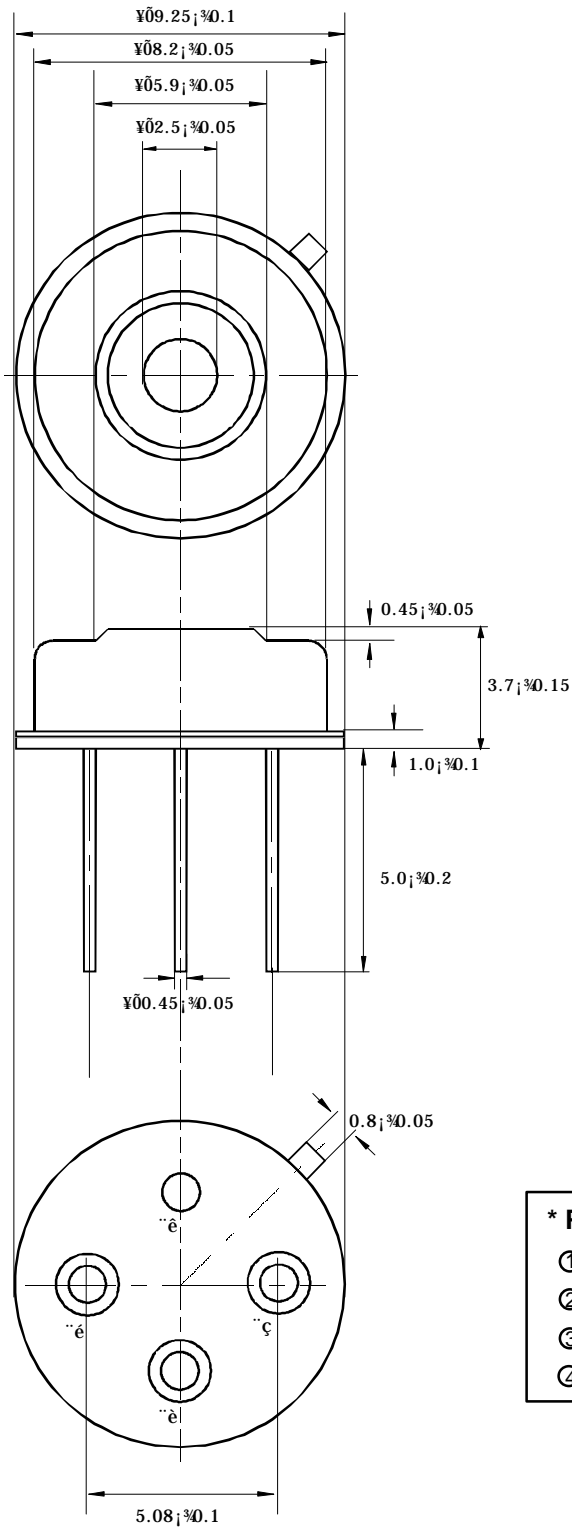


(5) Transmission Data of Silicon Filter





3. Outline of Sensor Package and pin Arrangement [unit : mm]



*** Pin arrangement**

- ① Thermopile output(+)
- ② Thermistor(+)
- ③ Thermopile output(-)
- ④ Thermistor(-) (GND)