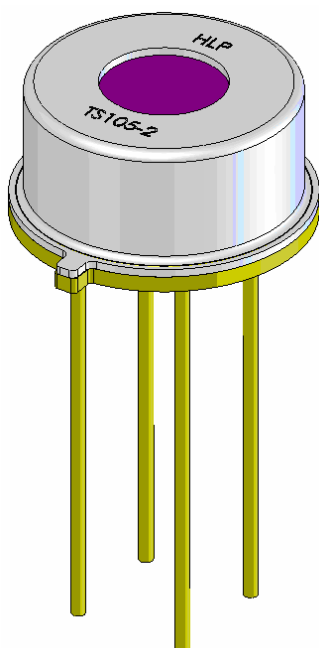


## THERMOPILE SENSOR ----- TS105--2

**The TS105-2 is a thermopile sensor  
for use in contactless temperature measurement**

Thermopiles are mainly used for contactless temperature measurement in many applications. Their function is to transfer the heat radiation emitted from the objects into voltage output. Major applications are appliances like microwave oven, clothes dryer, automatic cooking, medical devices like ear and forehead thermometer, automotive applications like car climate control, seat occupancy, blind spot alert, black ice detection, consumer products like printer, copier, mobile phone and many industry applications like paper web, plastic parts etc.



| Parameter                    | Typical                 | Condition           |
|------------------------------|-------------------------|---------------------|
| Package                      | T0-5                    |                     |
| Absorber Area                | 0.7×0.7 mm <sup>2</sup> |                     |
| Resistance of Thermopile     | 43±8 k <sub>Ω</sub>     | +25 °C              |
| TC of Resistance             | -0.06±0.04 %/K          | +25°C- +75°C        |
| Thermopile Voltage           | 6.0±1.7 mV              | +25°C, BB +100°C,DC |
| TC of sensitivity            | -0.45±0.08 %/K          | +25°C -+75°C        |
| Noise Equivalent Voltage     | 30 nV/Hz <sup>1/2</sup> | +25°C               |
| Rise Time                    | 20±5 ms                 | τ 63                |
| Field of View                | 90°                     |                     |
| Filter                       | 5.0 μm                  | cut on wavelength   |
| Operation Temperature        | -20 ... +85°C           |                     |
| Operation Temperature        | -20 ... +100°C          | non permanent       |
| Ambient Temperature Sensor - |                         |                     |

### Connections

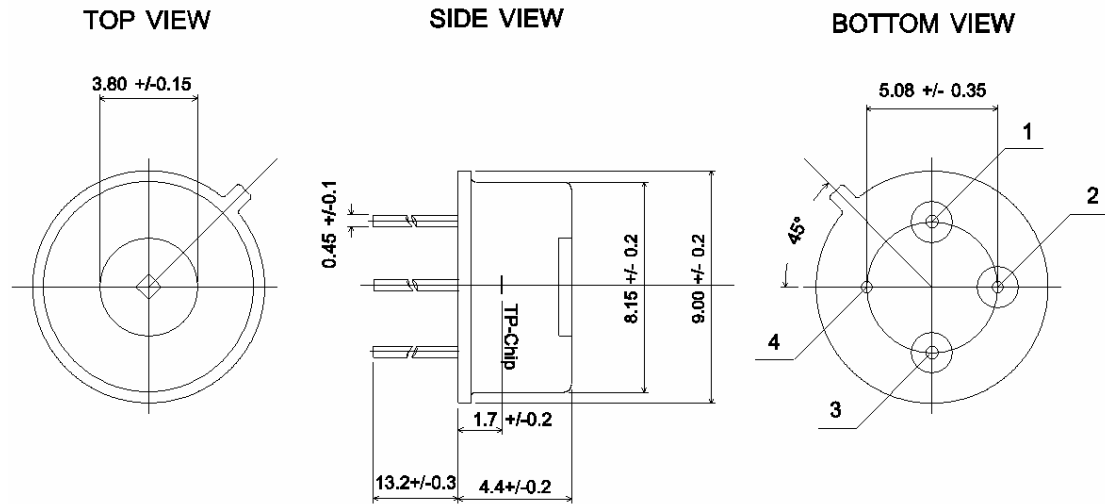
Pin 1 TP -

Pin 2 TP +

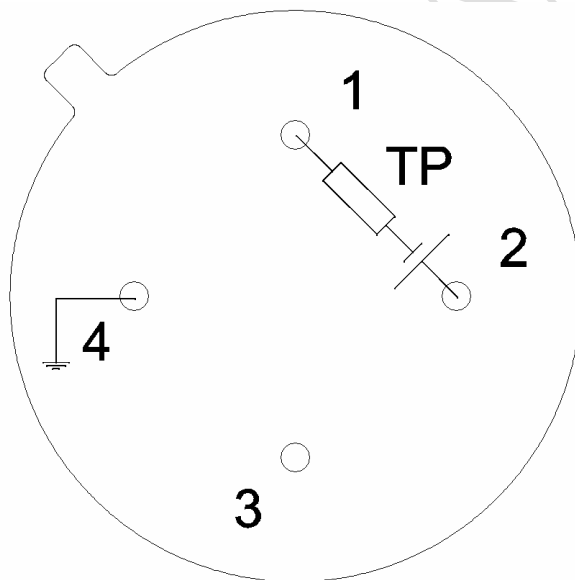
Pin 3 -

Pin 4 GND

## Mechanical Dimensions

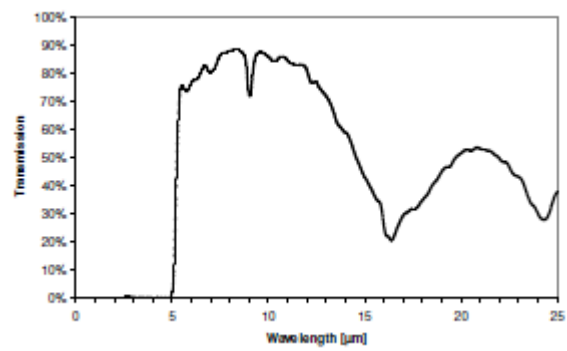


## Connections Filter Transmission



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## Bottom View



## Thermopile Signal

