

# Specification of Thermoelectric Module

TEC2-127-70-09

## Description

The TEC2-127-70-09 is a multistage module designed for greater temperature differential cooling, good for cooling and heating up to 100V applications. It is a 127-70 couples module in size of 62mm X 62mm (top)/ 62mm X 62mm (bottom). If higher operation or processing temperature is required, please specify, we can design and manufacture according to your special requirements.

## Features

- High Temperature Differential
- No moving parts, no noise, and solid-state
- Compact structure, small in size, light in weight
- Environmental friendly
- RoHS compliant
- Precise temperature control
- Exceptionally reliable in quality. high performance

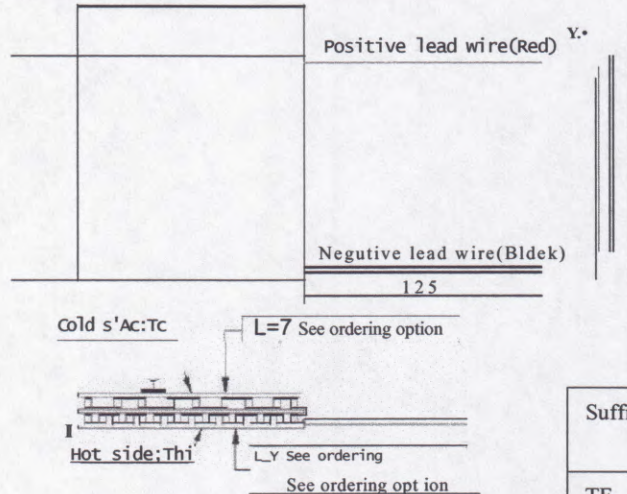
## Application

- Infrared (IR) Sensors
- CCD Sensor
- Gas Analyzers
- Calibration Equipment
- CPU cooler and scientific instrument
- Photonic and medical systems
- Guidance Systems

## Performance Specification Sheet

|                            |         |           |   |
|----------------------------|---------|-----------|---|
| Th(C)                      | 27      | 50        | Hot side temperature at environment: dry air, N2  |
| DT <sub>m</sub> (°C)       | 88      | 98        | Temperature Difference between cold and hot side of the module when cooling capacity is zero at cold side |
| U <sub>n,x</sub> (Voltage) | 14.6    | 16.4      | Voltage applied to the module at DT <sub>m</sub>  |
| InexramPs)                 | 8.9     | 8.9       | DC current through the modules at DT <sub>m</sub>   |
| Ocriax(Watts)              | 59.1    | 65.0      | Cooling capacity at cold side of the module under DT=0°e  |
| AC resistance(ohms)        | 1.41.65 | 1.55-1.82 | The module resistance is tested under AC  |

## Geometric Characteristics Dimensions in millimeters



## Sealing Option

| Suffix | Sealant          |
|--------|------------------|
| NS     | No sealing       |
| SS     | Silicone sealant |
| EPS    | Epoxy            |
| OS     | other than above |

## Ordering Option

| Suffix | Thickness (mm) | Flatness/ Parallelism (mm) | Lead wire length(mm) Standard/Optional length |
|--------|----------------|----------------------------|---|
| TF     | 0:9.10.15      | 0: 0.035/0.035             | 125±1/Specify                                 |
| TF     | 1:9.1A0.10     | 1:0.025/0.025              | 125±1/Specify                                 |
| TF     | 2:9.1A.05      | 2: 0.015/0.015             | 125±1/Specify                                 |

Eg. TFO1: Thickness 9.10.15(mm) and Flatness/ Parallelism (mm) : 0.025/0.025

## Additional

Ceramic material: Alumina (A1<sub>2</sub>O<sub>3</sub>,white 96%)

Solder tinning: Bismuth Tin (BiSn) M.P. 138C