

# SPECIFICATION

Product : Thermoelectric module

Part Number : TE1-19913L

## 1 . Scope

- 1—1 This specification is applied to Multicomp thermoelectric modules.  
1—2 Revision of these specifications is carried out after consent.

## 2 . Specification

### 2 - 1 Parameters

Parameters		Remarks	
Internal resistance	1.4 $\Omega$ $\pm$ 10%	Note-1	
I <sub>max.</sub>	13 A	Note-2	
V <sub>max.</sub>	24.1 V	Note-3	
	Th=27°C	Th=50°C	
Q <sub>max.</sub>	200 W	224 W	Note-4
$\Delta$ T <sub>max.</sub>	68°C	75°C	Note-5
solder melting point	138°C	Note-6	
Maximum. compress.	98.07N/cm <sup>2</sup> (10 kgf/cm <sup>2</sup> )	Note-7	

Note-1 Measured by AC 4-terminal method at 25°C.

Note-2 Maximum current at  $\Delta$ T<sub>max.</sub>

Note-3 Maximum voltage at  $\Delta$ T<sub>max.</sub>

Note-4 Maximum cooling capacity at I<sub>max.</sub>,V<sub>max.</sub> and  $\Delta$ T = 0°C.

Note-5 Maximum temperature difference at I<sub>max.</sub>,V<sub>max.</sub> and Q = 0W.

( Maximum parameters are measured in a vacuum 1.3P )

Note-6 The solder melting point of thermoelectric module

Note-7 Recommended maximum compression (not destruction limit)

## 2 - 2 Recommendations:

- Operating range: -40 °C to +90 °C
- Dropping or exerting mechanical shock will cause breakage, take care in handling
- Thinly spread thermally conductive grease should be placed between module and heat exchanger
- Surface deviation from flatness should be kept under 0.02mm
- For optimum reliability and performance it is recommended that the module be utilised  $<0.7 I_{max}$

## 2 – 3 Outline Drawing