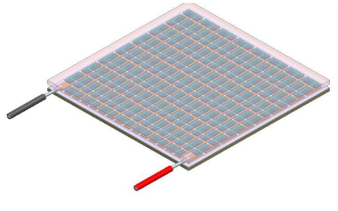


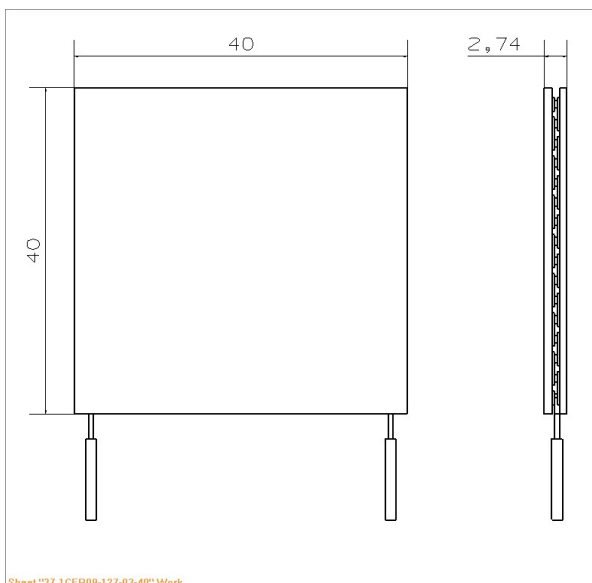
**Thermoelectric Cooler Electric and Thermal Performance**


dTmax °C	Qmax W	I <sub>max</sub> A	U <sub>max</sub> V	ACR Ohm	T <sub>h</sub> °C
69.9	104.3	13.05	14.6	0.94	27°C
79.4	114.1	12.55	16.0	1.06	50°C
88.5	123.2	12.50	18.1	1.19	75°C
91.3	125.6	12.35	18.7	1.24	85°C

**Note**

The specified performance values of the thermoelectric cooler (TEC) are determined under **standardized laboratory test conditions**. These conditions assume that the **hot side temperature (T<sub>hot</sub>)** is precisely maintained at the **ambient reference temperature (T<sub>amb</sub>)** through adequate heat dissipation and minimal thermal resistance.

Any increase in T<sub>hot</sub> above T<sub>amb</sub>, resulting from insufficient heat sinking or elevated thermal interface resistance, will cause the actual performance to deviate from the specified ratings

**Technical Drawing**


Dimensions are in mm

 Ceramic Material : Al<sub>2</sub>O<sub>3</sub> 96%

Solder Construction : SnAg 240°C

Sheet "37.1CeR09-127-03-40" Work

**TEC DESCRIPTION**

- Cold Side and Hot Side : bare Al<sub>2</sub>O<sub>3</sub>
- Internal Assembly: Solder Sn-Sb (T<sub>melt</sub>=230°C)
- Cold Side Surface: blank
- Hot Side Surface: blank
- Terminal Contacts : AWG-24 Wires, silicon insulated color-coded (Red/Black), multi-strand
- Bi-Te Material : high-grade, SPS type
- Protective Coating: available by request
- Laser marking: available by request

**KEY FEATURES**

- Up to 219°C short time processing (for mounting)
- RoHS EU Compliant

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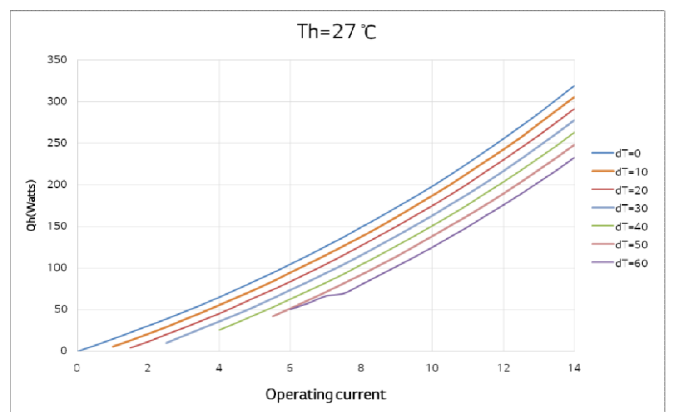
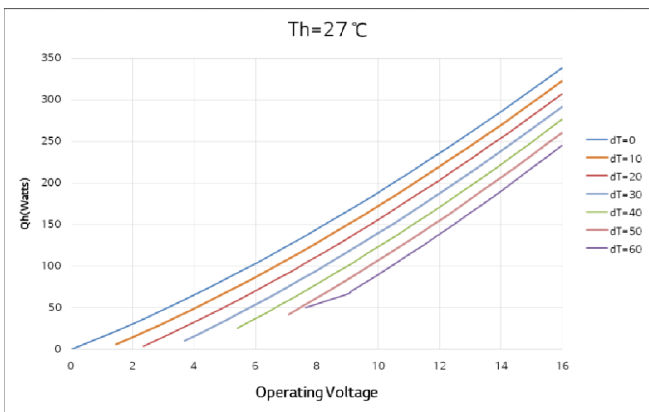
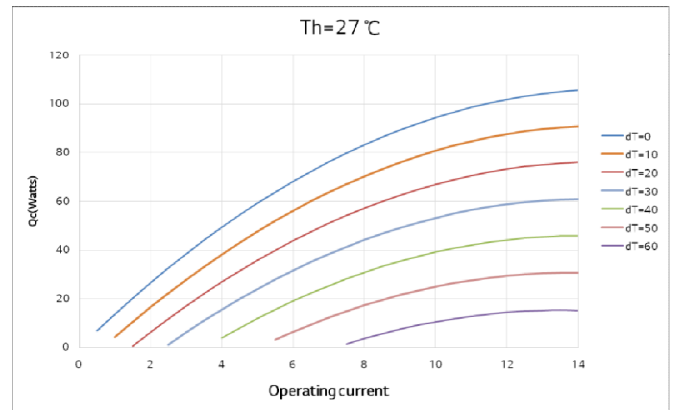
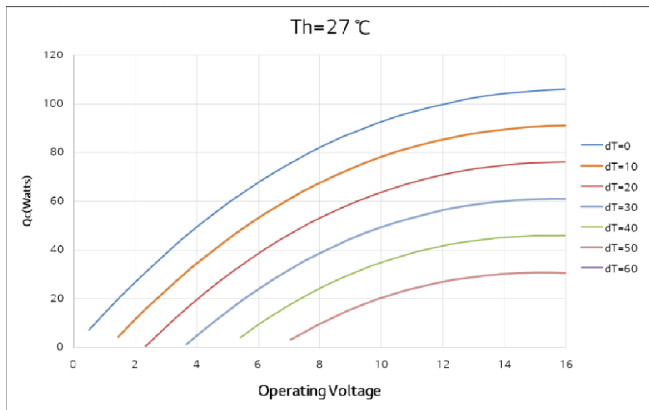
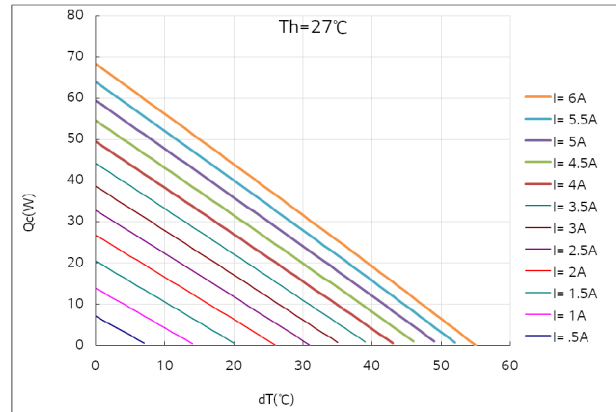
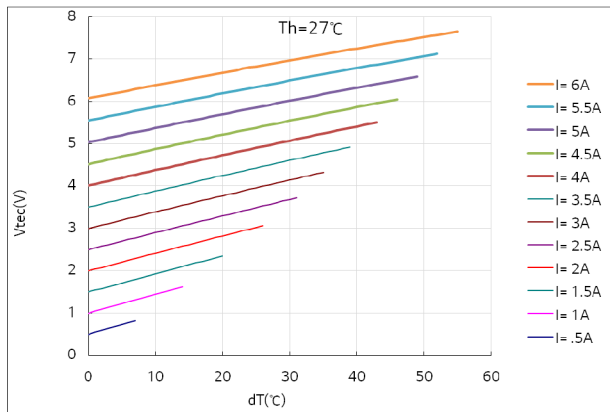
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## Electrical and Thermal Performance

### Installation and Orientation Guidelines

- For optimum thermal performance, ensure that the Cold Side of the Thermoelectric Cooler (TEC) is oriented toward the application requiring temperature control, while the Hot Side must be interfaced with a heat sink or other appropriate heat dissipation mechanism.
- The Cold Side of the TEC is always located opposite to the side with lead attachments.
- Lead attachment areas inherently contribute to passive heat loss. To minimize performance impact, these lead attachments should preferably be positioned on the side interfacing with the heat exchanger.



### Note

1. Max operating temperature: 80°C
2. Do not exceed  $I_{max}$  or  $V_{max}$  when operating module
3. Reference assembly guidelines for recommended installation

Electrical and Thermal Performance

