



The TMC Series of thermoelectric modules (TEMs) are designed to operate under cycling conditions. This product line is available in multiple configurations and is ideal for applications that require both heating and cooling mode (reverse polarity). Assembled with proprietary solder construction, Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the TMC Series is designed for higher current and larger heat-pumping applications.

FEATURES

- Thermal Cycling Durability
- Power Cycling Reliability
- Precise Temperature Control
- Strong Lead Attachment
- RoHS Compliant

APPLICATIONS

- Analytical Instrumentation
- PCR Cyclers
- Thermal Test Sockets
- Electronic Enclosure Cooling
- Chillers (Liquid Cooling)

PERFORMANCE SPECIFICATIONS

Hot Side Temperature (°C)	25°C
Qmax (Watts)	46
Delta Tmax (°C)	68.5
I _{max} (Amps)	4.3
V _{max} (Volts)	18.5
Module Resistance (Ohms)	3.90

THICKNESS	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
0.161" ± 0.001"	0.001" / 0.001"	Lapped	Lapped	13.78"
4.10 ± 0.02 mm	0.02 / 0.02mm	Lapped	Lapped	350 mm

SEALING OPTION

SUFFIX	SEALANT	COLOR	TEMP RANGE	DESCRIPTION
R	RTV	White	-60 to 204 °C	Non-corrosive, silicone adhesive sealant
E	Epoxy	Black	-55 to 150 °C	Low density syntactic foam epoxy encapsulant

Americas: +1 888.246.9050

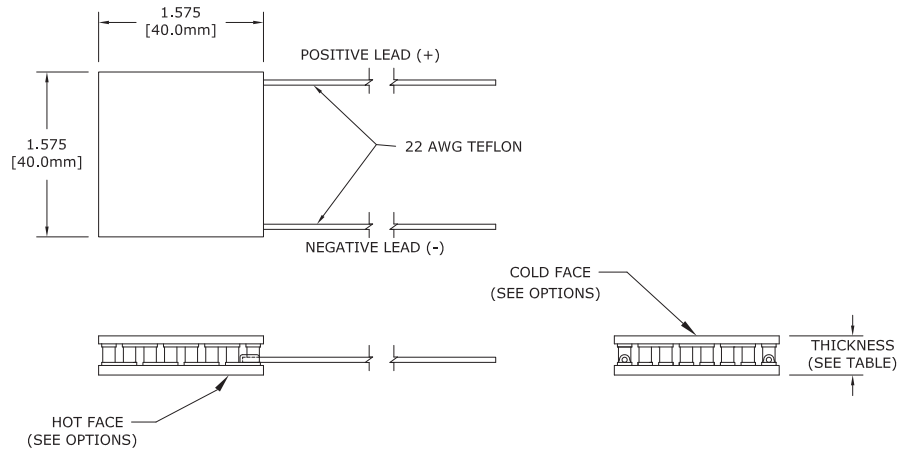
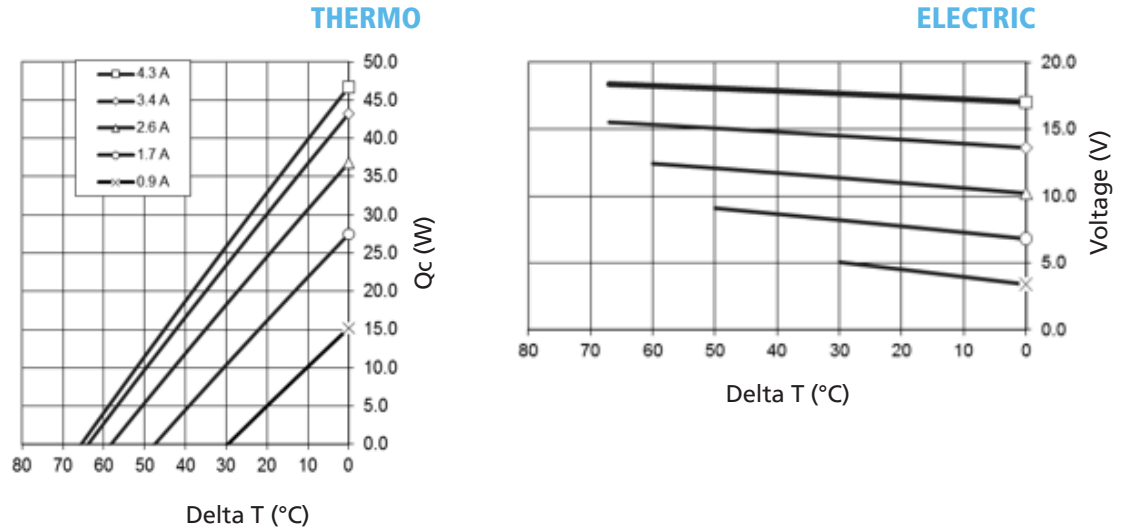
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Performance Curves at Th = 25°C



Ceramic Material: Alumina (Al₂O₃)
Solder Construction: 271°C, Proprietary

OPERATING TIPS

- Max Operating Temperature: 120°C
- Do not exceed I_{max} or V_{max} when operating module
- Reference assembly guidelines for recommended installation

THR-DS-TMC, 161, 1.2, 4.5 MS 0813

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