PolarTEC™ Series PT6-7-F2-3030

Thermoelectric Modules

The PolarTEC™ Series consists of porch-style thermoelectric modules (TEMs). The hot side of the ceramic has an extended edge that allows strong lead attachment to accommodate the wiring of multiple TEMs into an array.

This product line is available in 4, 6, and 8 Amp configurations and is ideal for high-volume production. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the PolarTEC Series is designed for higher current and larger heat-pumping applications.

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FEATURES

- Strong lead attachment
- Precise temperature control
- Reliable solid state operation
- No sound or vibration
- DC operation
- RoHS compliant

APPLICATIONS

- Analytical instrumentation
- Photonics laser systems
- Electronic enclosure cooling
- Food & beverage cooling
- Chillers (liquid cooling)
- Consumer appliances

SPECIFICATIONS

TECHNICAL		
Hot Side Temperature (°C)	25°C	50°C
Qmax (Watts)	29.2`	33.3
Delta Tmax (°C)	65	75
Imax (Amps)	6.0	6.0
Vmax (Volts)	8.0	9.0
Module Resistance (Ohms)	1.22	1.38

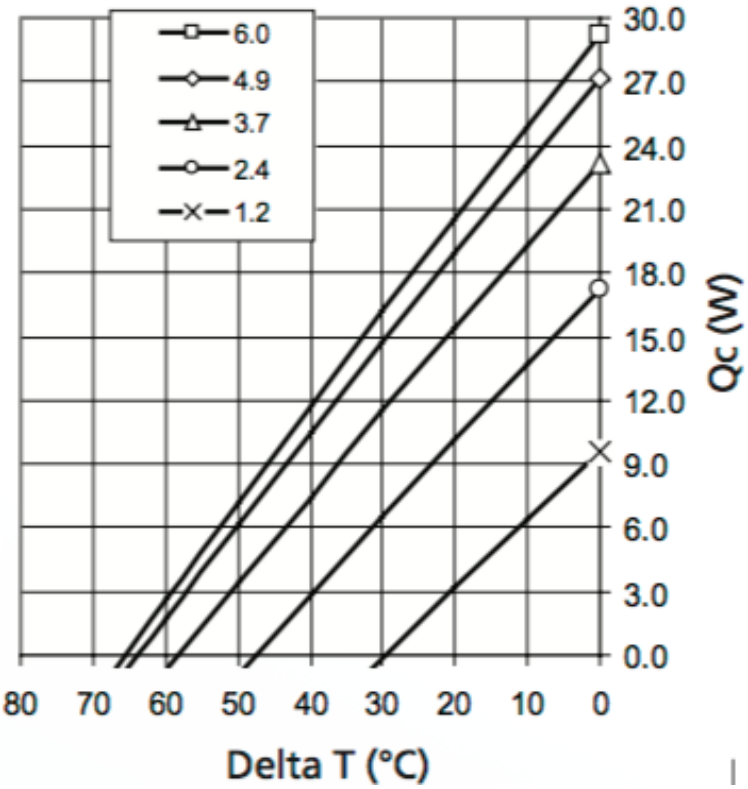
SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
TA	0.150”±0.001”	0.001”/0.001”	Lapped	Lapped	6.0”
TB	0.150”±0.0005”	0.0005”/0.0005”	Lapped	Lapped	6.0”

SEALING OPTIONS

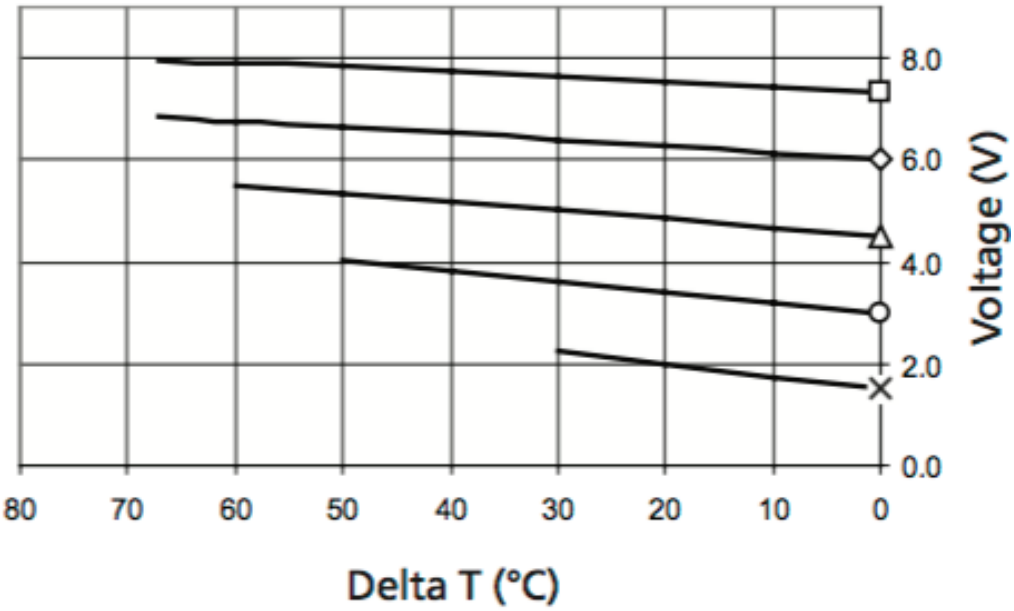
SUFFIX	SEALANT	COLOR	TEMP RANGE	DESCRIPTION
RT	RTV	White	-60 to 204 °C	Non-corrosive, silicone adhesive
EP	Epoxy	Black	-55 to 150 °C	Low density syntactic foam epoxy encapsulant

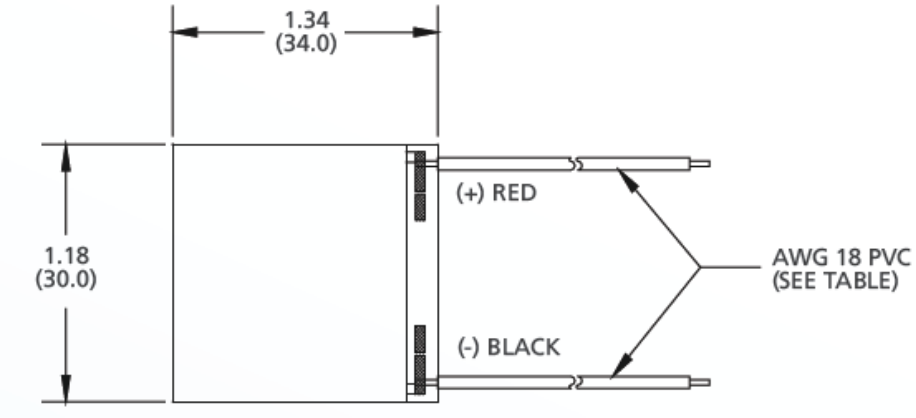
Performance Curves at Th =25°C

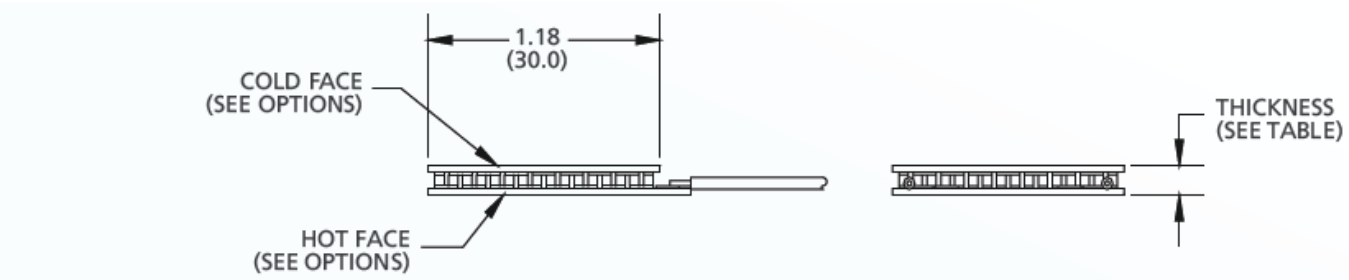
THERMO



ELECTRIC







Ceramic Material: Alumina (Al_2O_3)
Solder Construction: 138°C, Bismuth Tin (BiSn)

NOTES

1. Max operating temperature: 80°C
2. Do not exceed Imax or Vmax when operating module
3. Reference assembly guidelines for recommended installation