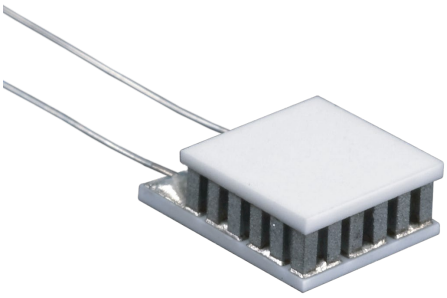
OptoTEC™ Series HOT20-31-F2A-0909

Thermoelectric Module



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Note: *This product has reached end of production and is available on a limited basis only. This product series has been replaced with the improved HiTemp ET Series product offering. Consider using ET20-31-F2A-0909 HiTemp ET Series module as a replacement.*

The OptoTEC™ Series is a miniature thermoelectric module (TEM). This product series is primarily used in applications to stabilize the temperature of sensitive optical components in telecom and photonics industries.

This product line is available in multiple configurations and surface finishing options. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the OptoTEC Series is designed for lower current and lower heat-pumping applications. Custom designs are available to accommodate metallization, pretinning, ceramic patterns, and solder posts, however MOQ applies.

FEATURES

- Miniature geometric sizes
- Precise temperature control
- Reliable solid state operation
- No sound or vibration
- DC operation
- RoHS compliant

APPLICATIONS

- Laser diodes
- CCD cameras
- Calibration equipment
- Infrared (IR) sensors
- Pump lasers
- Crystal oscillators
- Optical transceivers

SPECIFICATIONS

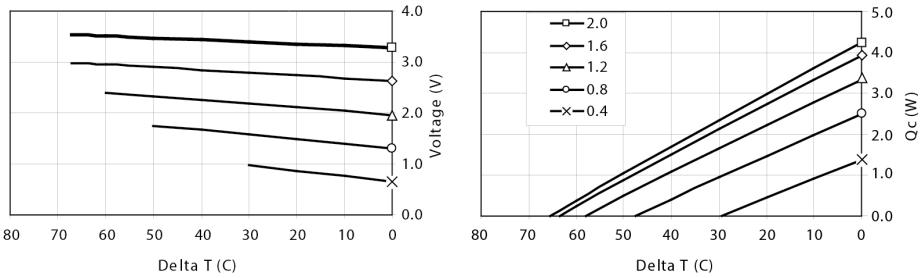
PERFORMANCE		
Hot Side Temperature (°C)	25	50
Qmax (Watts)	4.2	4.7
Delta Tmax (°C)	67	77
Imax (Amps)	2.0	2.0
Vmax (Volts)	3.5	4.0
Module resistance (ohms)	1.62	1.82

SUFFIX	THICKNESS PRIOR TO TINNING	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
11	0.086”± 0.002”	0.0002” / 0.002”	Lapped	Lapped	2.0”
TB	0.086”± 0.0005”	0.0005” / 0.0005”	Lapped	Lapped	2.0”
00	0.098”± 0.005”	NA / NA	Metallized	Metallized	2.0”
22	0.098”± 0.005”	NA / NA	Pre-tinned	Pre-tinned	2.0”
GG	0.098”± 0.005”	NA / NA	AuPlated	AuPlated	2.0”

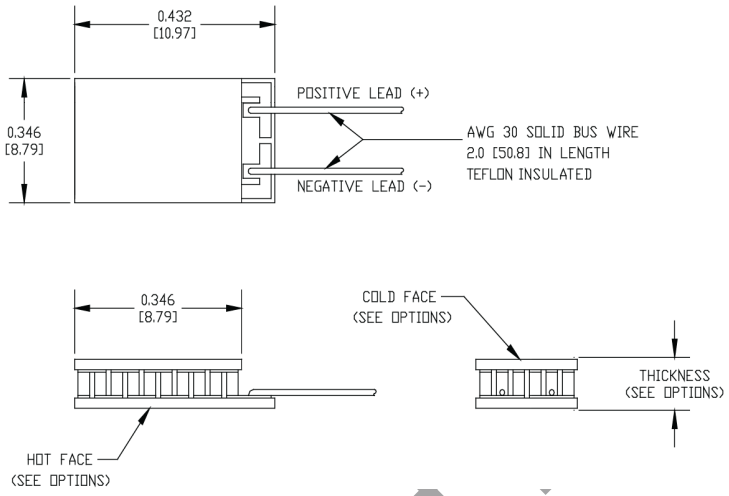
SEALING OPTIONS

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

PERFORMANCE CURVES



MECHANICAL DRAWING



Ceramic Material: 96% Alumina Ceramics
Solder Construction: 271°C, Proprietary

OPERATING TIPS

- Max operating temperature: 175°C
- Do not exceed Imax or Vmax when operating module
- Reference assembly guidelines for recommended installation
- Solder tinning also available on metallized ceramics