Laird THERMAL SYSTEMS

CP Series
CP2-31-06
Thermoelectric Modules

The Ceramic Plate (CP) Series of Thermoelectric Modules (TEMs) is considered 'the standard' in the thermoelectric industry.

This broad product line of high-performance and highly reliable TEMs is available in numerous heat pumping capacities, geometric shapes, and input power ranges. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the CP Series is designed for higher current and large heat-pumping applications.

FEATURES

- Precise Temperature Control
- Compact Geometric Sizes
- Reliable Solid-State Operation
- No Sound or Vibration
- Environmentally Friendly
- DC Operation
- RoHS Compliant

APPLICATIONS

- Medical Lasers
- Lab Science Instrumentation
- Clinical Diagnostic Systems
- Photonics Laser Systems
- Electronic Enclosure Cooling
- Food & Beverage Cooling
- Chillers (Liquid Cooling)

TECHNICAL SPECIFICATIONS		
Hot Side Temperature (°C)	25	50
Qmax (W)	29.3	33.8
Delta Tmax (°C)	68	75
Imax (Amps)	14.0	14.0
Vmax (Volts)	3.5	4.0
Module Resistance (Ohms)	0.23	0.26

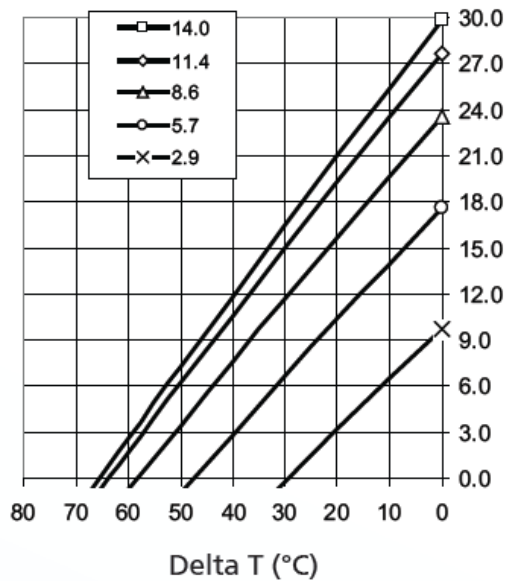
SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
L	0.180"±0.010"	0.0015"/0.0015"	Lapped	Lapped	4.5"
L1	0.180"±0.001"	0.001"/0.001"	Lapped	Lapped	4.5"
L2	0.180"±0.0005"	0.0005"/0.0005"	Lapped	Lapped	4.5"
ML	0.184"±0.010"	0.002"/0.002"	Metallized	Lapped	4.5"
LM	0.184"±0.010"	0.002"/0.002"	Lapped	Metallized	4.5"
MM	0.188"±0.010"	0.002"/0.002"	Metallized	Metallized	4.5"

SEALING OPTIONS

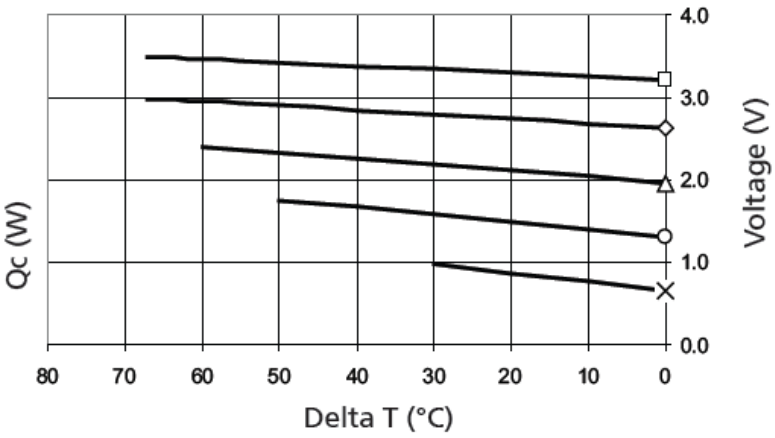
SUFFIX	SEALANT	COLOR	TEMPERATURE RANGE	DESCRIPTION
RT	RTV	White	-60 to +204 °C	Non-corrosive, silicone adhesive
EP	Epoxy	Black	-55 to +150 °C	Low density syntactic foam epoxy encapsulant

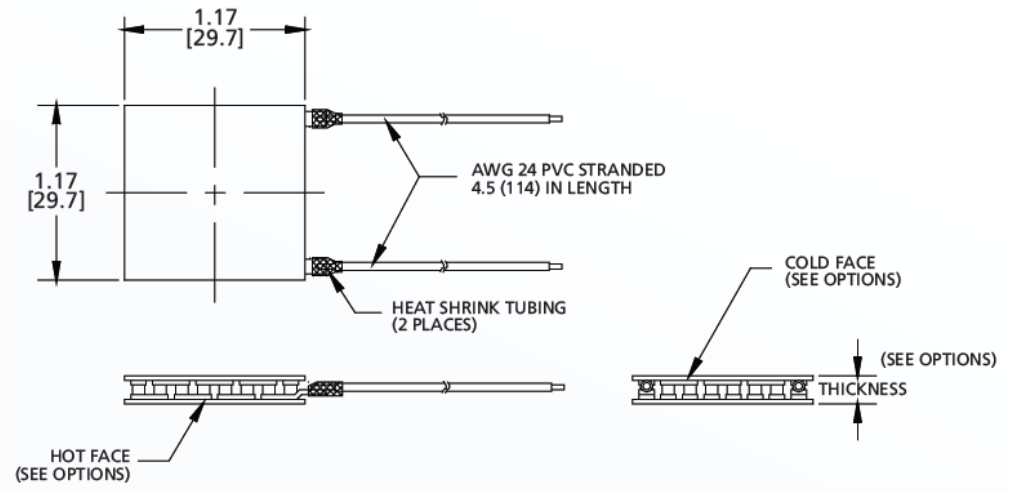
PERFORMANCE CURVES AT Th = 25° C

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
4. Solder tinning also available on metallized ceramics

RoHS