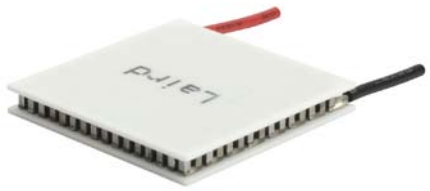
Ceramic Plate Series CP08-127-05

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.

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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)

PERFORMANCE SPECIFICATIONS		
Hot Side Temperature (°C)	25°C	50°C
Qmax (Watts)	22.6	24.8
Delta Tmax (°C)	67	75
Imax (Amps)	2.6	2.6
Vmax (Volts)	14.4	16.4
Module Resistance (ohms)	5.10	5.75

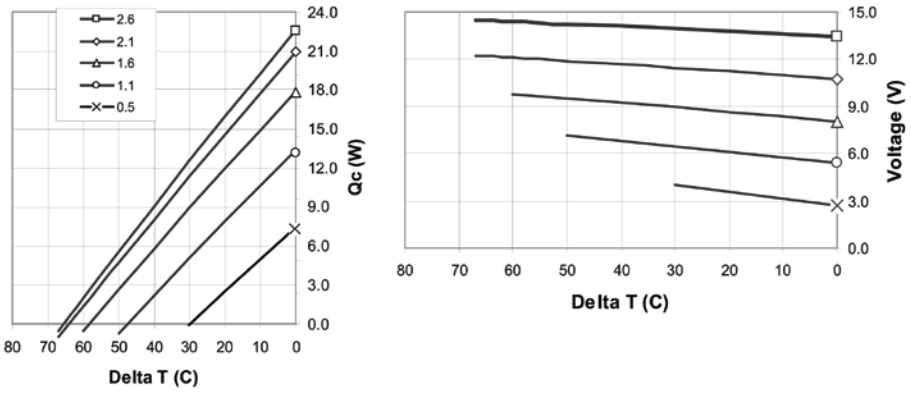
SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
L1	0.122"± 0.001"	0.001" / 0.001"	Lapped	Lapped	4.5"
L2	0.122"± 0.0005"	0.0005" / 0.0005"	Lapped	Lapped	4.5"
ML	0.127"± 0.010"	0.002" / 0.002"	Metallized	Lapped	4.5"
LM	0.127"± 0.010"	0.002" / 0.002"	Lapped	Metallized	4.5"
MM	0.132"± 0.010"	0.002" / 0.002"	Metallized	Metallized	4.5"

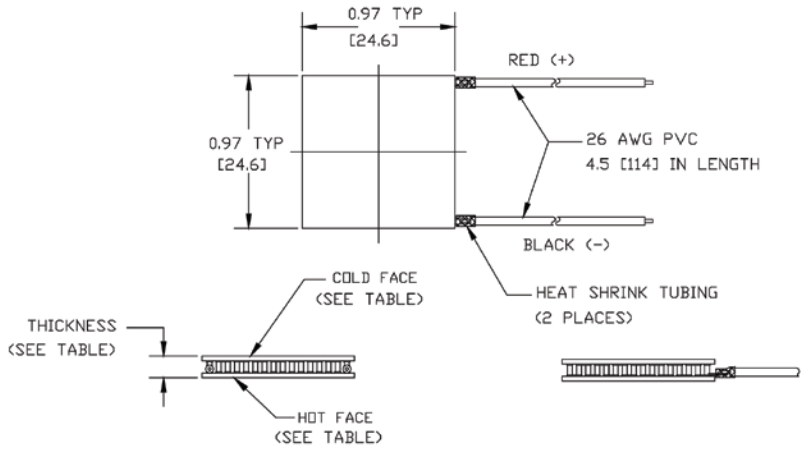
SEALING OPTION

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 at Th = 25°C

THERMO ELECTRIC





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

OPERATING TIPS

- Max Operating Temperature: 80°C
- Do not exceed Imax or Vmax when operating module
- Reference assembly guidelines for recommended installation
- Solder tinning also available on metallized ceramics