

# Ceramic Plate Series CP14-71-06

## 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.

Americas: +1.919.597.7300  
Europe: +46.31.420530  
Asia: +86.755.2714.1166  
ets.sales@lairdtech.com  
[www.lairdtech.com](http://www.lairdtech.com)

### 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 diagnostics systems
- Photonics laser systems
- Electronic enclosure cooling
- Food & beverage cooling
- Chillers (liquid cooling)

### SPECIFICATIONS

TECHNICAL		
Hot Side Temperature (°C)	25°C	50°C
Qmax (Watts)	28.7	31.4
Delta Tmax (°C)	68	75
I <sub>max</sub> (Amps)	6.0	6.0
V <sub>max</sub> (Volts)	8.1	9.2
Module Resistance (Ohms)	1.26	1.42

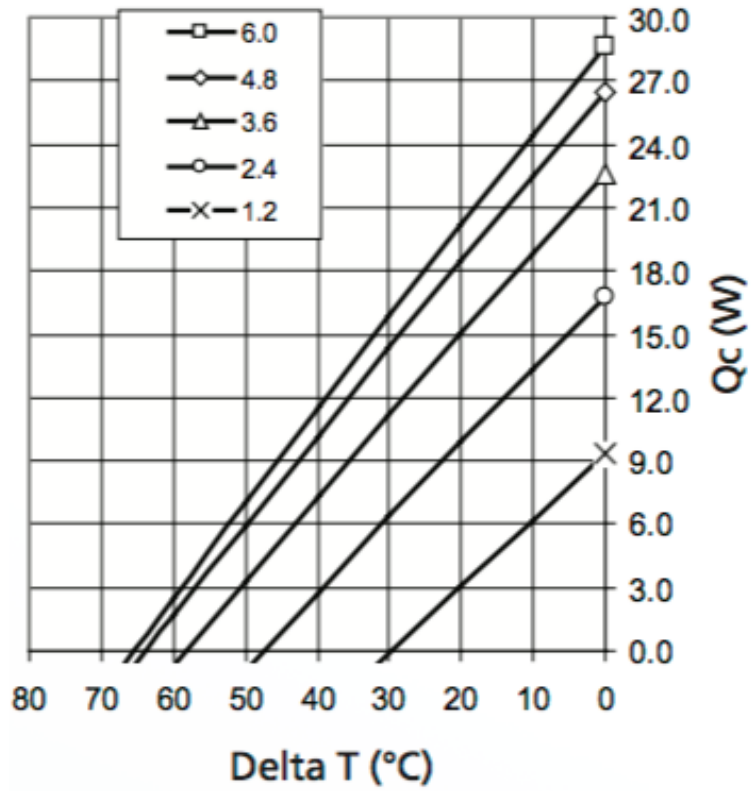
SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
L	0.150"±0.010"	0.0015"/0.0015"	Lapped	Lapped	4.5"
L1	0.150"±0.001"	0.001"/0.001"	Lapped	Lapped	4.5"
L2	0.150"±0.0005"	0.0005"/0.0005"	Lapped	Lapped	4.5"
ML	0.154"±0.010"	0.002"/0.002"	Metallized	Lapped	4.5"
LM	0.154"±0.010"	0.002"/0.002"	Lapped	Metallized	4.5"
MM	0.158"±0.010"	0.002"/0.002"	Metallized	Metallized	4.5"

### SEALING OPTIONS

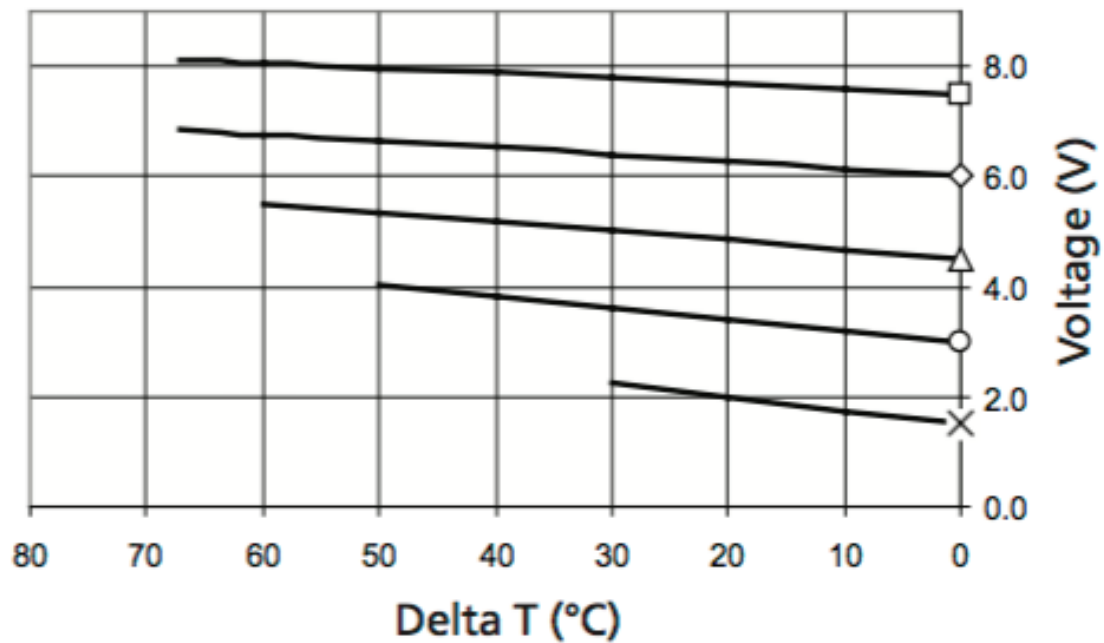
SUFFIX	SEALANT	COLOR	TEMP RANGE	DESCRIPTION
RT	RTV	White	-60 to 204 °C	Non-corrosive, silicone adhesive
EP	Epoxy	Black	-55 to 150 °C	Low density syntactic foam epoxy encapsulant

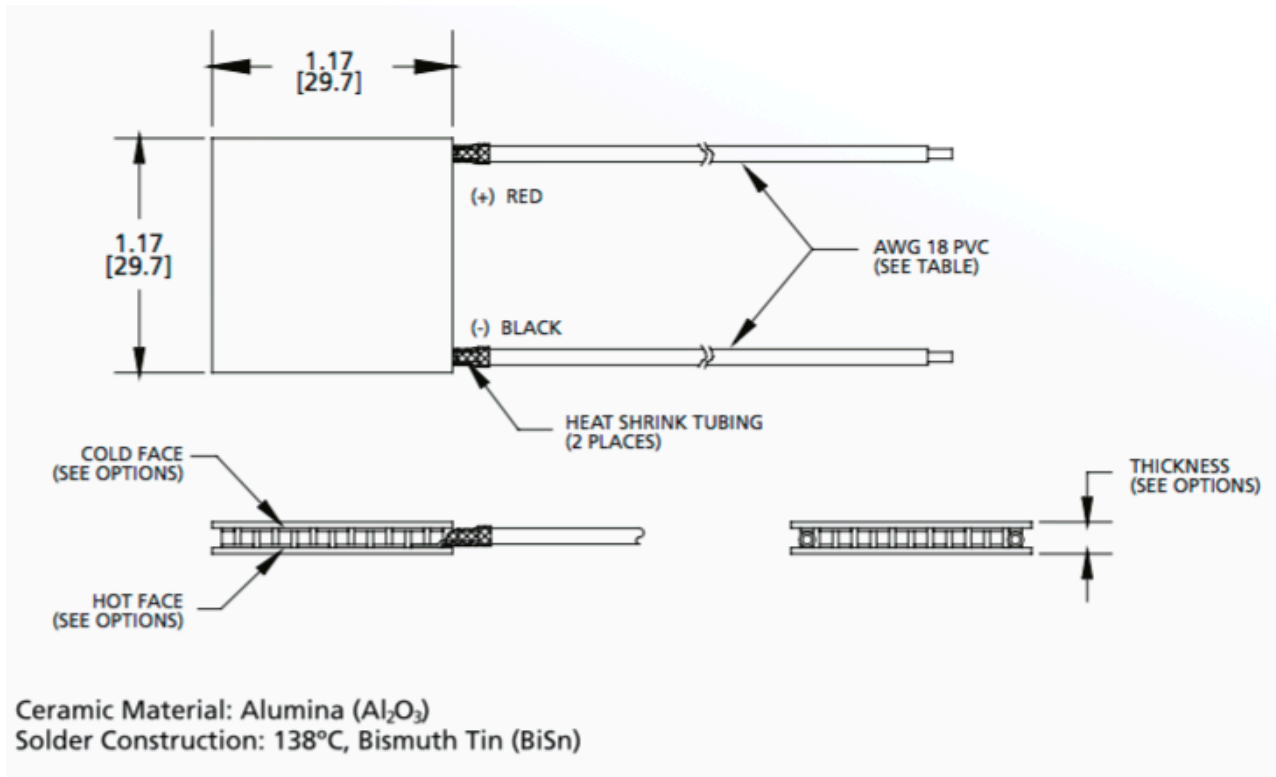
Performance Curves at  $T_h = 25^\circ\text{C}$

THERMO



ELECTRIC





### NOTES

1. Max operating temperature: 80°C
2. Do not exceed  $I_{max}$  or  $V_{max}$  when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

LAIRD-ETS-CP14-71-06-DATA-SHEET-101416

Any information furnished by Laird Technologies, Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird Technologies materials rests with the end user. Laird Technologies makes no warranties as to the fitness, merchantability, suitability or non-infringement of any Laird Technologies materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies products are sold pursuant to the Laird Technologies' Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request. © Copyright 2016 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trademarks or registered trademarks of Laird Technologies, Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird Technologies or any third party intellectual property rights.