



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Ceramic Plate Series CP12-161-04

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

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)	79.2	87.0
Delta Tmax (°C)	67	75
I _{max} (Amps)	7.3	7.3
V _{max} (Volts)	18.4	20.8
Module Resistance (Ohms)	2.33	2.63

SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
L1	0.126" ± 0.001"	0.001" / 0.001"	Lapped	Lapped	4.5"
L2	0.126" ± 0.0005"	0.0005" / 0.0005"	Lapped	Lapped	4.5"

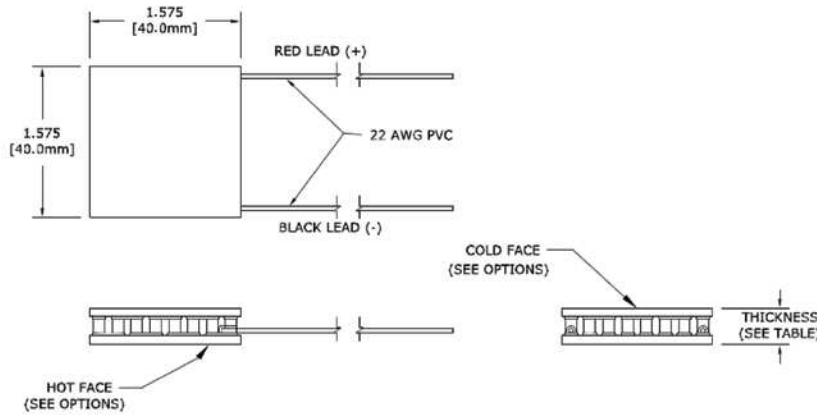
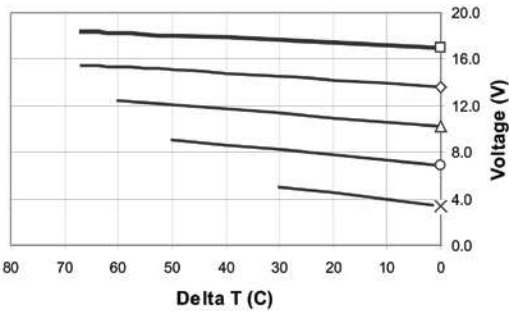
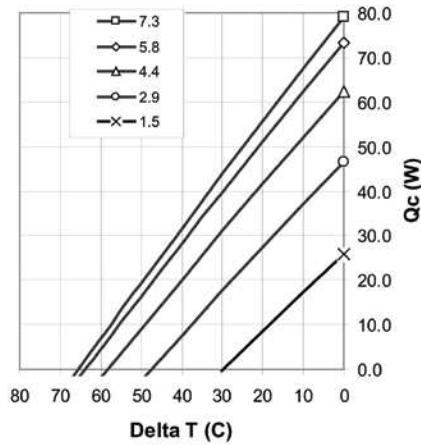
SEALING OPTION

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 (Al₂O₃)
 Solder Construction: 138°C, Bismuth Tin (BiSn)

OPERATING TIPS

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

LAIRD-ETS-CP12-161-04-DATA-SHEET-100616

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