# imall

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

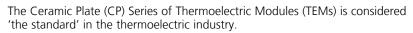
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





### **CP Series CP14,199,06** Thermoelectric Modules

Innovative **Technology** for a **Connected** World



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)

PERFORMANCE SPECIFICATIONS						
25°C	50°C					
80.9	88.8					
67	75					
6.0	6.0					
22.7	25.7					
3.49	3.94					
	80.9 67 6.0 22.7					

SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
L1	$0.150'' \pm 0.001''$	0.001" / 0.001"	Lapped	Lapped	10″
L2	$0.150'' \pm 0.0005''$	0.0005" / 0.0005"	Lapped	Lapped	10″

#### **SEALING OPTION**

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

### global solutions: local support ...

Americas: +1 888.246.9050 Europe: +46.31.420530 Asia: +86.755.2714.1166

clv.customerpos@lairdtech.com www.lairdtech.com



### **CP Series CP14,199,06 Thermoelectric Modules**

### Innovative **Technology** for a **Connected** World

#### **THERMO ELECTRIC** 90.0 25.0 -4.8 A 80.0 20.0 <u>→</u> 3.6 A Voltage (V) 70.0 15.0 —×— 1.2 A 60.0 50.0 10.0 40.0 X 5.0 30.0 0.0 20.0 80 70 60 50 40 30 20 10 0 Delta T (°C) 10.0 0.0 60 50 40 30 20 0 80 70 10 Delta T (°C) 1.575 [40.0mm] POSITIVE LEAD (+) 1,575 18 AWG PVC 10.0mm] NEGATIVE LEAD (-)

Performance Curves at Th = 25°C

COLD FACE (SEE OPTIONS) THICKNESS (SEE TABLE) HOT FACE (SEE OPTIONS)

Ceramic Material: Alumina (Al<sub>2</sub>O<sub>3</sub>) 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

#### THR-DS-CP14, 199, 06 0812

Any information furnished by Laind 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 reds with the end user, since Laird Technologies materials agents cannot be aware of all potential uses. Laird Technologies materials or products are sold pursuant to the Laird Technologies. 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. Technologies and is a not the fitness, merchantability or suitability or request. @ Copyright 2011 Laird Technologies, Inc. All Rights Reserved. Laird, Technologies taile to the Laird Technologies Logy, and other marks are tradiented tamas or sold pursuant to the Laird Technologies. Technologies to the laird Technologies to the product sold pursuant to the Laird Technologies. Technologies to the laird Technologies Logy. And other marks are tradiented tamas or sold pursuant to the Laird Technologies to the 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.