



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

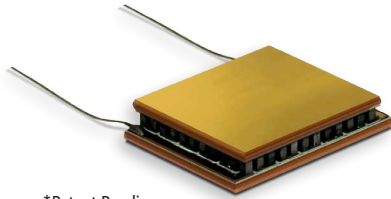
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# Tlam OptoTEC™ Series OT20,66,F0T,1211 Thermoelectric Module



\*Patent Pending

The Tlam OptoTEC™ Series is a miniature thermoelectric module (TEM) that uses a thermally conductive dielectric with copper exteriors as substrates. This product line has improved heat spreading, higher mechanical integrity and can provide cost savings over standard ceramic based TEMs with similar form factors in high volume. This product series has been created for applications to stabilize the temperature of sensitive optical components in telecom, photonics, medical and consumer markets.

This product line is available in multiple configurations and surface finishing options. The Tlam OptoTEC™ Series is designed for lower current and lower heat-pumping applications and are easily customizable to accommodate alternate sizes, heat pumping capacities, pretinning, unique circuit patterns, or solder posts, however MOQ applies.

## FEATURES

- High Heat Spreading
- Robust Mechanical Design
- Precise Temperature Control
- No Sound or Vibration
- Cost Savings in High Volume
- Flexible Customization

## APPLICATIONS

- Laser Diodes
- Consumer Medical Lasers
- Optical Transceivers
- Pump Lasers
- Crystal Oscillators

## PERFORMANCE SPECIFICATIONS

Hot side temperature (°C)	25	50
Qmax (watts)	9.0	9.9
Delta Tmax (°C)	67	77
I <sub>max</sub> (amps)	2.0	2.0
V <sub>max</sub> (volts)	7.5	8.5
Module resistance (ohms)	3.44	3.88

Passed Telcordia GR-468-CORE Issue 2 Reliability Testing

SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
22	0.104" +/- 0.005"	NA / NA	Pre-tinned	Pre-tinned	2.0"
GG	0.104" +/- 0.005"	NA / NA	Au Plated	Au Plated	2.0"

## 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

Americas: +1 888.246.9050

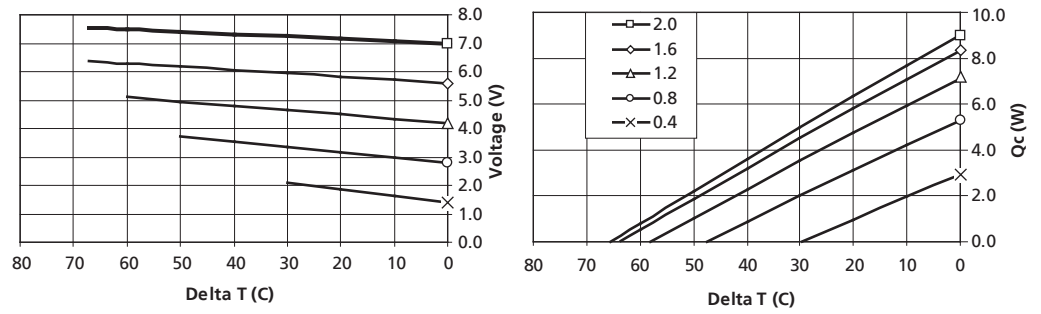
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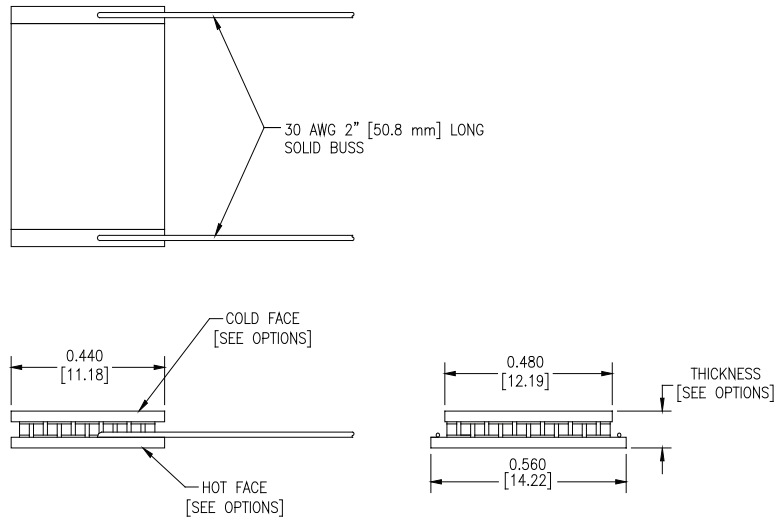
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## PERFORMANCE CURVES



## MECHANICAL DRAWING



Solder Construction: 138°C BiSn  
Tlam Substrates

### 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 Tlam substrates

THR-DS-OT20,66,F0T,1211,GG,W2.25 1013

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