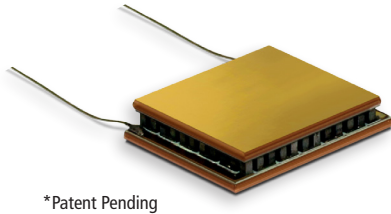


Tlam OptoTEC™ Series OT20,66,F0T,1211 Thermoelectric Module



*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 customizatable to accomodate 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 _{max} (amps) | 2.0 | 2.0 |
| V _{max} (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

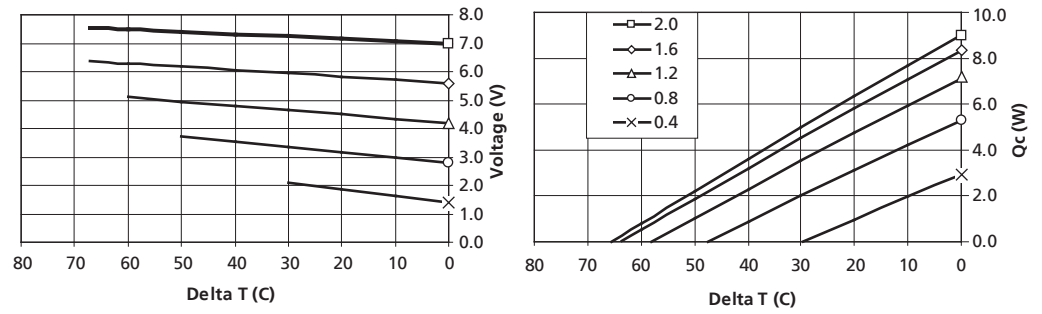
Europe: +46.31.704.67.57

Asia: +86.755.2714.1166

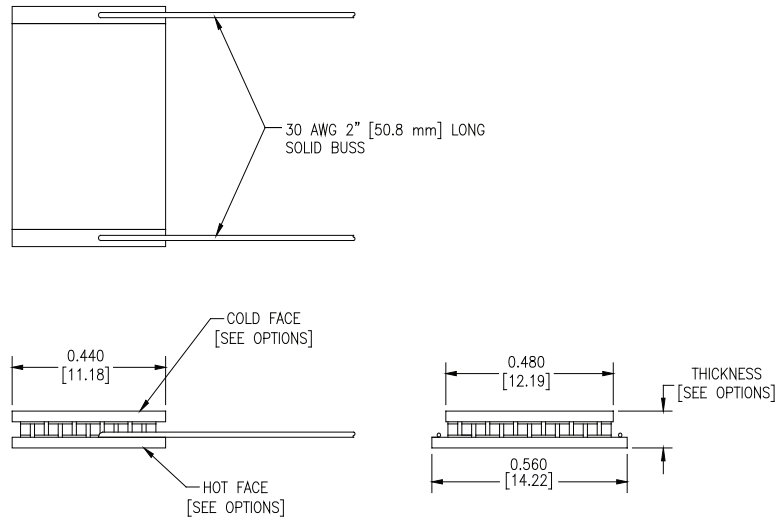
clv.customerpos@lairdtech.com

www.lairdtech.com

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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