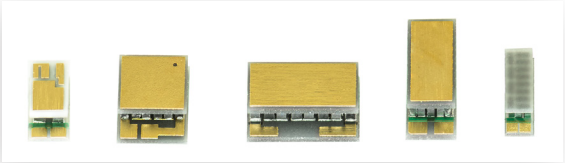
Optoelectronics

TECs for TO Cans

Technical Data Sheet

Phononic's high-performance TECs efficiently cool TO can lasers while reducing your overall TOSA power consumption. Configured to your specific application, this series can be used to cool a variety of TO can sizes, including TO56, TO40, and even as small as TO32. They are a great option for cost-effective, low-data-rate lasers from 1G-50G in passive optical networks, wireless network and FTTX applications.

These TECs are excellent for use in any package or TOSA form factor where space is at a premium. Leverage our expertise to plan your future product roadmap. We will not limit you to standard products; all of our solutions are designed to meet your needs, and we ramp quickly to accommodate tight product launch timelines.



Features

- Small footprint
- Lower power consumption
- High heat pumping density
- Compatible with I-temp or C-temp operating ranges
- Application-specific designs available

Integration Options

- Bare wire bond pads
- Wire bonding posts
- Cold side electrical connections
- High-temperature solder
- Solder pre-tinning
- Patterned cold-side metallization
- Pre-attached cold-side thermistor
- Automation-ready packaging

End-Customer Applications

- Laser cooling for optical components and telecommunications
- 10G tunable lasers for DWDM (dense wavelength division multiplexing)
- Lasers for Passive Optical Network (PON) applications
- 10G EML (electro-absorption modulated lasers)
- 1550nm and 1577nm TO can lasers

Up to 30%
Lower Power Consumption in a Small Package

Benefits:

Extremely Low Power Consumption

Achieve 30% lower power consumption than typical TEC performance

High Heat Pumping Density

Realize 60% higher heat pumping density in a very thin TEC - our pico-TEC platform is perfect for FTTx applications

Exceptional Design Support

Benefit from our expertise: we'll consult with you, enabling faster time to market with a design done right the first time

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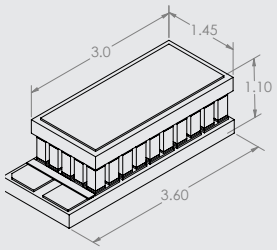
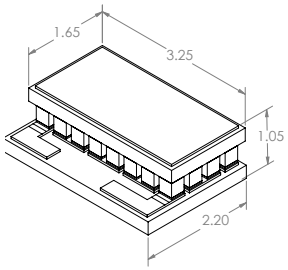
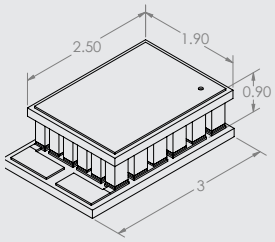
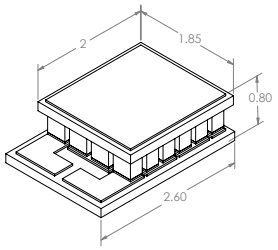
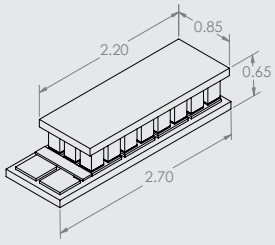
TO Can Product Specifications

		TEC Performance (T_{HOT} = 75°C)					
Part Number	TEC Dimensions	AC Resistance (Ω)	Optimum heat load (miliwatts)*	$Q_{C,MAX}$ [Watts]	ΔT_{MAX} [°C]	V_{MAX} [Volts]	I_{MAX} [Amps]
FBM-009394		6.6	120 - 400	1.2	88	4.1	0.52
FBP-011632		1.6	190 - 630	1.9	85	2.6	1.3
FBM-012889		3.4	120 - 400	1.2	88	2.95	0.73
FBP-011751		1.3	140 - 470	1.4	85	1.95	1.3
FBP-013189		2.2	70 - 240	0.73	82	1.9	0.7

* Optimal heat load is the cold side heat load range under which the TEC operates at or near highest efficiency conditions. Hot side temperature is 75°C, cold side temperature is 45°C to 55°C.

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