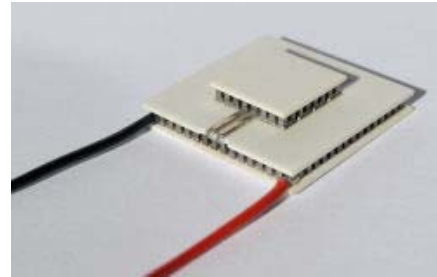
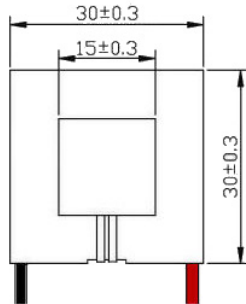


## Specifications (Hot-Side Temperature 27 °C)

<b>I<sub>max</sub></b> maximum current at $\Delta T_{max}$	<b>V<sub>max</sub></b> maximum voltage at $\Delta T_{max}$	<b>Q<sub>cmax</sub></b> maximum cooling capacity at I <sub>max</sub> , V <sub>max</sub> and $\Delta T = 0\text{ }^{\circ}\text{C}$	<b><math>\Delta T_{max}</math></b> maximum temperature difference at I <sub>max</sub> , V <sub>max</sub> and Q <sub>c</sub> = 0W	<b>Internal Resistance</b>
<b>2.8 Amps</b>	<b>15.7 Volts</b>	<b>8.7 Watts</b>	<b>95 °C</b>	<b>5.0 <math>\Omega</math> <math>\pm</math> 10%</b>



Dimensions: 1st Stage (base) 30 x 30,  
2nd stage (top) 15 x 15, (7.2 thick) (mm)

Operating temperature range: -50 °C ~ +105 °C  
(Solder melting point: +138 °C)

Thickness tolerance:  $\pm$  0.025mm  
Flatness and parallel variance:  $\pm$  0.05mm

Standard lead wires: 20 AWG, Tin (Sn) plated at module  
interface, with a maximum temperature of +105 °C  
(Other wiring options available)

Maximum recommended compression: 1Mpa

Ceramics: Alumina (AL<sub>2</sub>O<sub>3</sub>)

Can be built with metalized (and tinned) surfaces.

Lot number (only) printed on the cold-side ceramic.

RoHS Compliant

*Are you a manufacturer and need a slightly different module?  
Our TE modules can be customized in a variety of ways and  
we can likely provide precisely what you require. Let us know  
what you need and we'll be happy to let you know what we  
can do for you.*

TM2 30-15-2.8 is a two-stage thermoelectric cooler with a  $\Delta T_{max}$  of 95 °C, with a hot-side temperature of 27 °C (105 °C with T<sub>h</sub> of 50 °C), delivered to a 15x15mm cold-side. Typically powered by 12 or 15 volt DC power sources TM2 30-15-2.8 provides up to 25 °C more  $\Delta T$  than is possible with a single-stage module.

With a Q<sub>max</sub> of about 9 watts the module is best cooling a no-load ~ low-load sensor or device. At full power, this module has a total heat load of roughly 50 watts to heat-sink from the 30x30mm hot-side. It's likely a forced convection heat-sink, liquid heat-sink, or cold ambient (i.e. wing-tip CCD) will be required.

In electro-optic and photonic applications, TM2 30-15-2.8 is commonly used to maintain a cold, and constant, temperature in order to stabilize the wavelength detector or sensor.

**TM2 30-15-2.8 Web Page**

Contact [sales@electracool.com](mailto:sales@electracool.com) for a quotation

Advanced Thermoelectric, PO Box 1003, White River, VT 05001

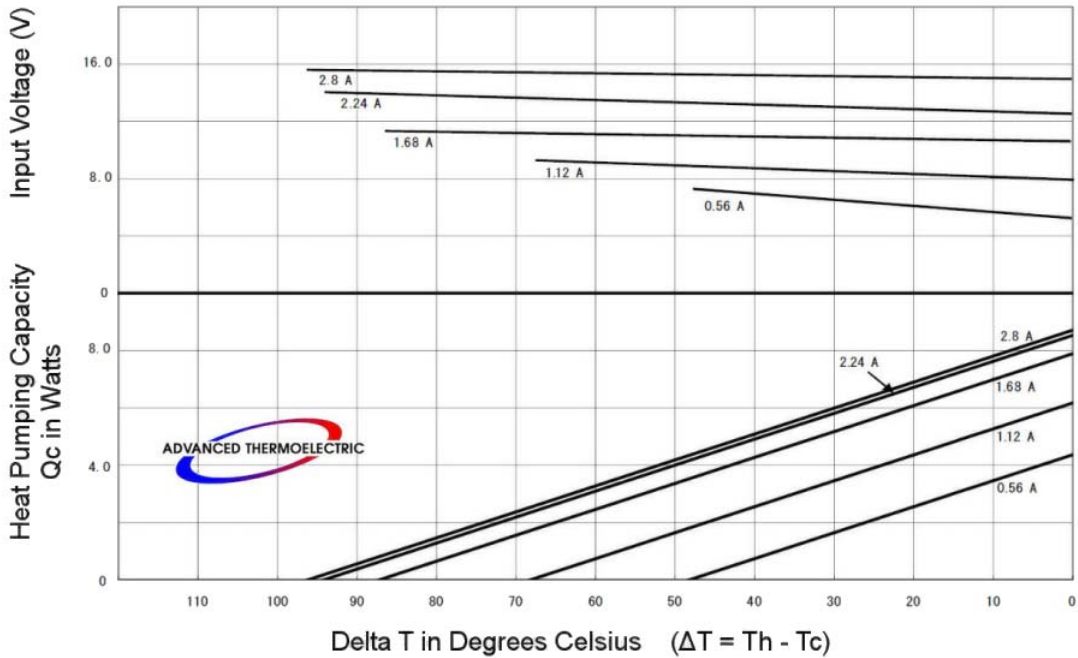
Advanced Thermoelectric toll-free 1-866-665-5434 (603) 888-2467 [sales@electracool.com](mailto:sales@electracool.com)



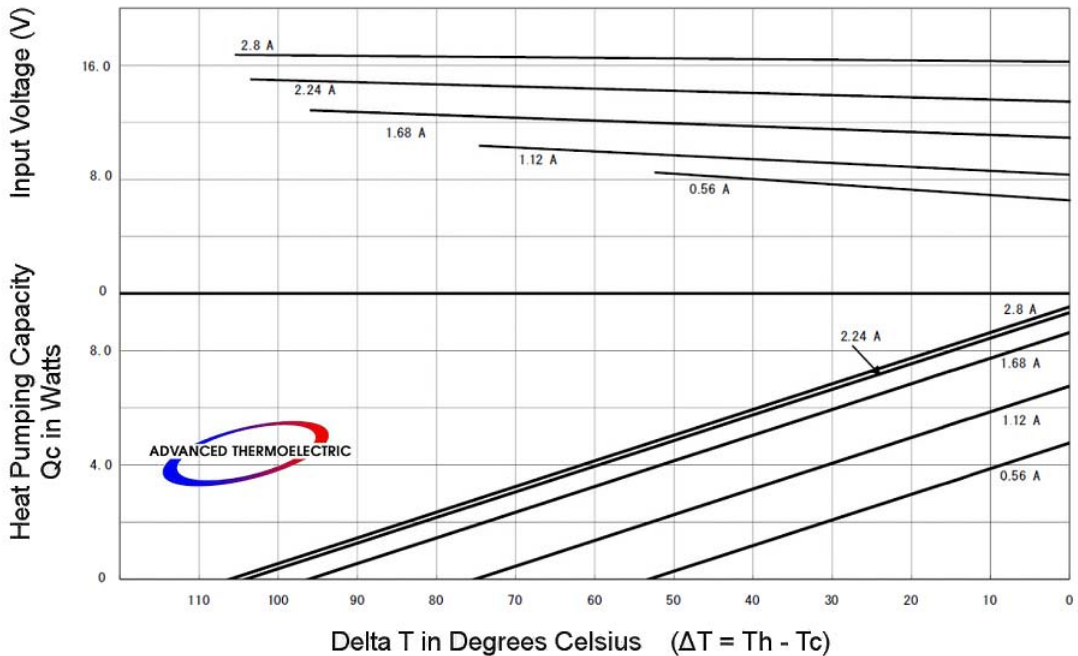
# TM2 30-15-2.8

2-STAGE THERMOELECTRIC COOLING MODULE

2-Stage Thermoelectric Module TM2 30-15 Performance Curves  $T_h = 27\text{ }^\circ\text{C}$



2-Stage Thermoelectric Module TM2 30-15 Performance Curves  $T_h = 50\text{ }^\circ\text{C}$



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