



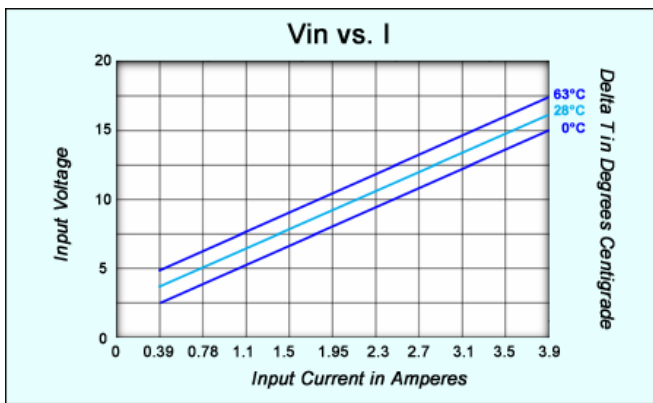
# TM-127-1.0-4.0

Thermoelectric Module

UNIT CODE	DESCRIPTION
TM-127-1.0-4.0	Thermoelectric Cooling Module

SPECIFICATIONS			
Current $I_{max}$	Voltage $V_{max}$	Cooling Capacity $Q_{max}$	Maximum Delta T $\Delta T_{max}$
4.0 Amps	17.5 Volts	38 Watts	71 °C

PERFORMANCE CURVES ( $T_h = 25\text{ °C}$ )



**TM-127-1.0-4.0** This multi-purpose single-stage thermoelectric module is our most popular 30 x 30 mm module intended for use with 12 to 15-volt DC power sources. It has a substantial cooling capacity and works well with a variety of economical heat-sinks. Available with metallized and tinned surface/s. This was formerly pn: HP-127-1.0-4.0. RoHS compliant.

TM-127-1.0-4.0 may be used for cooling, heating and temperature stabilization and is employed in a wide range of applications including electro-optic/telecommunications, lab/scientific/biomedical, consumer and aerospace/military.

Operating temperature  $-50\text{ °C}$   $+200\text{ °C}$

Option Suffix designations:  
[Anti-corrosion Potting](#) = "P"  
[Epoxy edge sealing](#) = "E"  
 Lapping to  $\pm 0.01\text{ mm}$  = "L"  
 (for example TM-127-1.0-4.0"E")

Prices: 100+ \$15.95 1K+ \$10.95

All specifications, data and drawings are subject to change without notice Rev: January 2010

Module Characteristics and Value Descriptions:

$I_{max}$  is the maximum (optimal) input current in amperes.  
 $V_{max}$  is the maximum input voltage in volts when the current is optimal ( $I_{max}$ ).  
 $Q_{max}$  is the maximum amount of heat the module is capable of pumping. This value is achieved when there is no difference in the temperature ( $DT=0$ ) on the modules two surfaces. If your application requires cooling, the heat pumping capacity will be less.  
 $\Delta T_{max}$  or  $DT_{max}$  is the maximum temperature differential between the hot and cold side of the module with no heat load ( $Q=0$ ). As the thermal mass of the object to be cooled increases the  $\Delta T$  narrows until  $Q_{max}$  is reached and  $\Delta T=0$ .