



# TEC datasheet

## HT004017(10,10)

### Description

The HT(high temperature)Series of Thermoelectric Modules (TECs) is considered 'the standard' in the thermoelectric industry. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide DBC(Direct Bonding Copper) ceramics and High temperature solder. the HT Series is designed for higher current,high-performance, highly reliability,and high temperture environment.

### Features

DC operation and Precise temperature control  
 No sound or vibration and solid-state  
 High performance and high reliability  
 RoSH complicant  
 Provide the customization service.

### APPLICATIONS

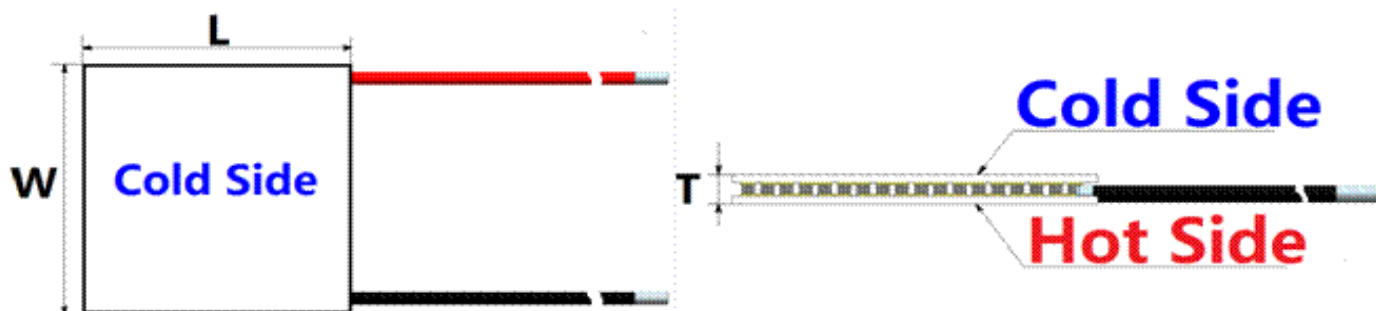
Chillers (Liquid Cooling)  
 Temperature stabilizer  
 Biological and medical instruments  
 Industrial and testing instruments  
 Beauty equipment

### Performance Specification

Hot side temperature	30°C	50°C	Hot side temperature when working
QCmax (Watts)	1.8	2.0	Qc When dT=0 and I=Imax
Delta Tmax (°C)	67.0	71.0	dT when I=Imax and Qc=0
Imax (amps)	3.9	3.9	Current When dT=dTmax or Qc=Qcmax
Umax (Voltage)	0.8	0.9	Voltage When dT=dTmax and I=Imax
AC resistance (ohms)	0.17	0.19	The module resistance is tested under AC
Tolerance	± 9%		For thermal and electricity parameters

### Geometric Characteristics

Dimensions in millimeters



Length	Width	Thickness	Flatness	Wire		
				Model	Length	Terminal
10.0 ± 0.2	10.0 ± 0.2	4.21 ± 0.05	±0.02	Customizable	Customizable	Customizable

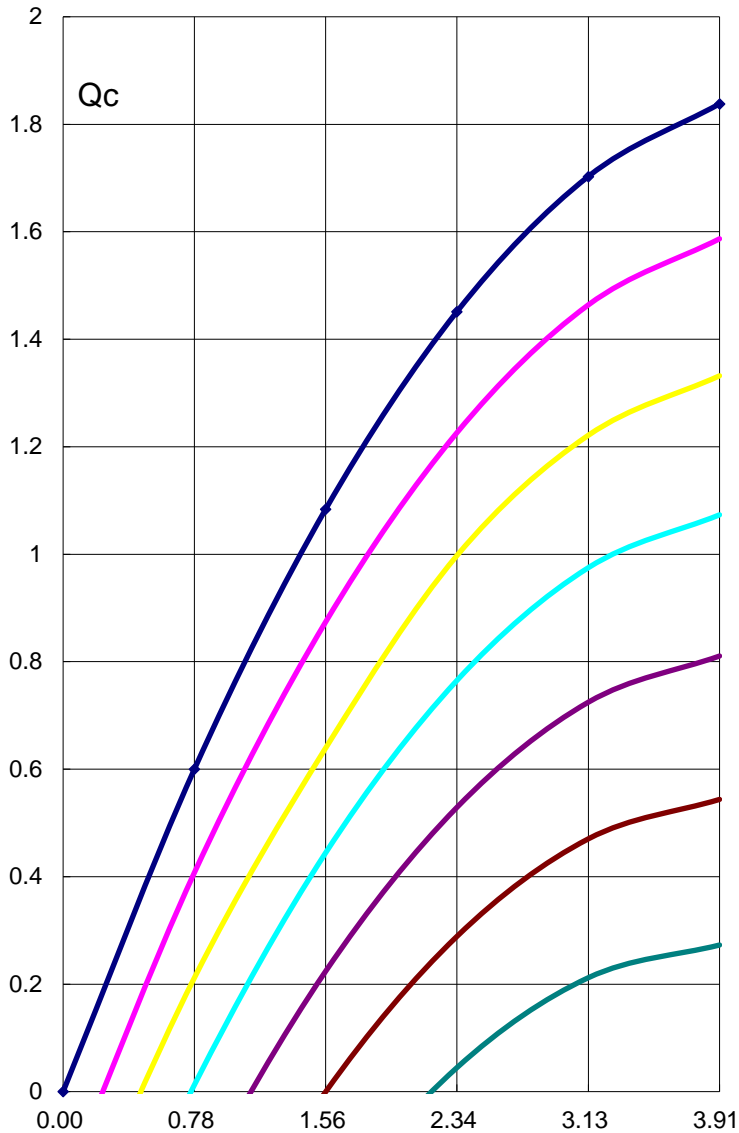


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### Performance Curves at $T_h=25\text{ }^\circ\text{C}$

#### Qc Vs I Curve

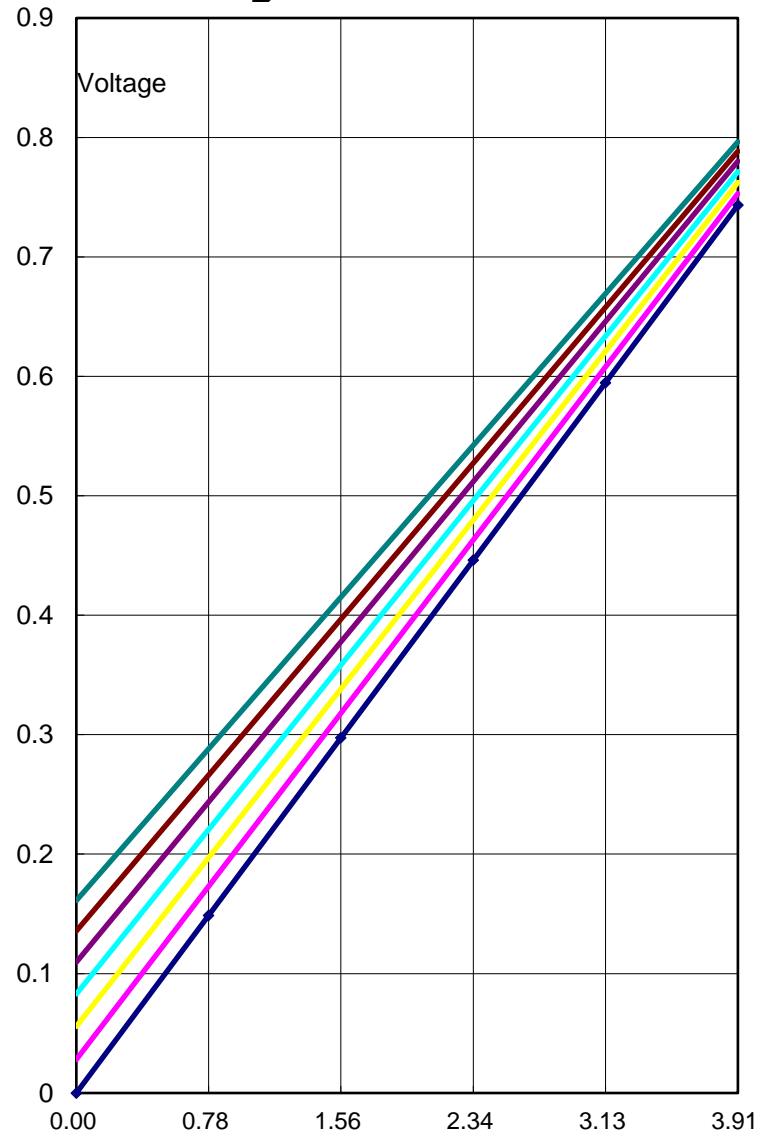


X axis is current (A)

—  $dT=0^\circ\text{C}$  —  $dT=10^\circ\text{C}$  —  $dT=20^\circ\text{C}$  —  $dT=30^\circ\text{C}$  —  $dT=40^\circ\text{C}$  —  $dT=50^\circ\text{C}$  —  $dT=60^\circ\text{C}$

\* $dT = T(\text{hot side}) - T(\text{cold side})$

#### Voltage Vs I Curve



### Operation Cautions

- Using DC (DC) power supply and do not exceed  $I_{max}$  or  $V_{max}$  when operating module;
- Hot side of the module mounted on a heat radiator before turn on the current;
- Operation or storage module below  $100\text{ }^\circ\text{C}$
- Attention should be paid to force balance during installation to prevent side pressure or any kind of impact;
- Can use at cycling from  $0$  to  $60\text{ }^\circ\text{C}$ , but can not be used with wide range temperature cycling;