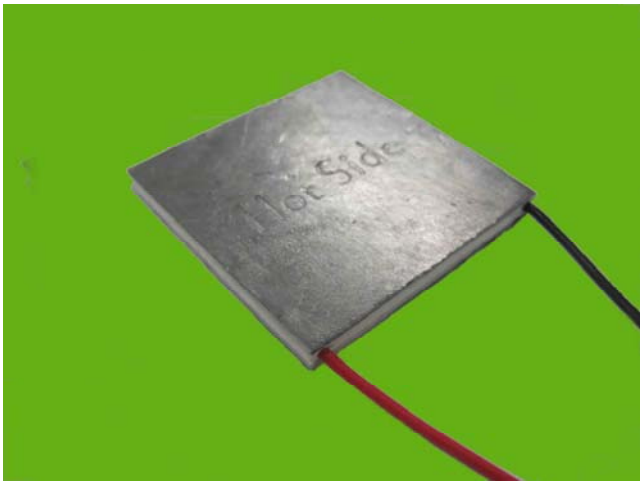
Specification of Thermoelectric Module

TEP1-1264-1.5

Description

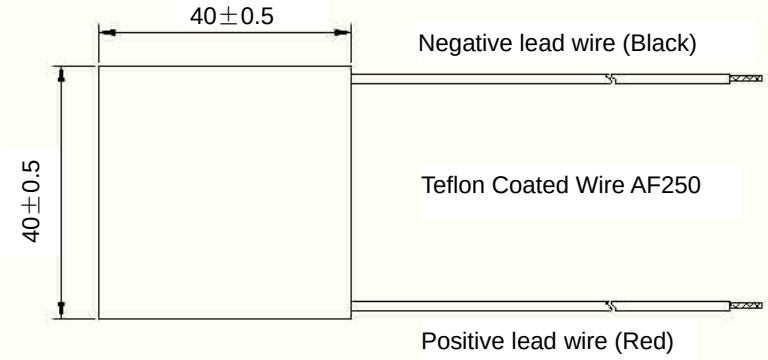
The power module is designed and manufactured by our unique technology for converting heat source directly into electricity. The module is Bi-Te based thermoelectric module that can work at the temperature of as high as 320°C(608F) continuously and stand with up to 400C(752F) heat source . The thermoelectric module will generate DC electricity as long as there is a temperature difference across the module. The more power will be generated when the temperature difference across the module becomes larger, and the efficiency of converting heat energy into electricity will increase therefore. The module is stuck with the high thermal conductivity graphite sheet on its both sides of the ceramic plates to provide low contact thermal resistance, hence you do not need to apply thermal grease or other heat transfer compound when you install the module. The graphite sheet can work well in extremely high temperature.

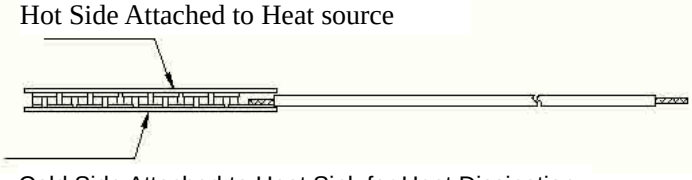


Peformance Specification Sheet

Hot Side Temperature (℃)	250
Cold Side Temperature (℃)	50
Open Circuit Voltage (V)	8.4
Matched Load Resistance (ohms)	3.1
Matched load output voltage (V)	4.2
Matched load output current (A)	1.3
Matched load output power (W)	5.7
Heat flow across the module(W)	≈127
Heat flow density(Wcm^{-2})	≈8.0
AC Resistance(ohms) Measured under 27℃ at 1000Hz	1.3~1.8

Geometric Characteristics Dimensions in millimeter





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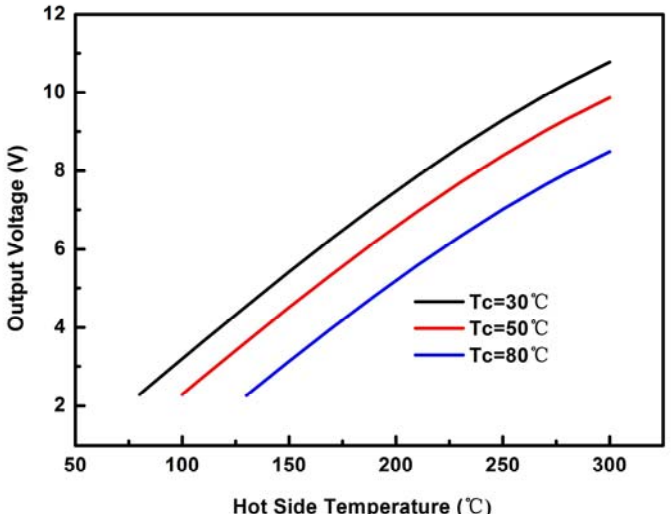
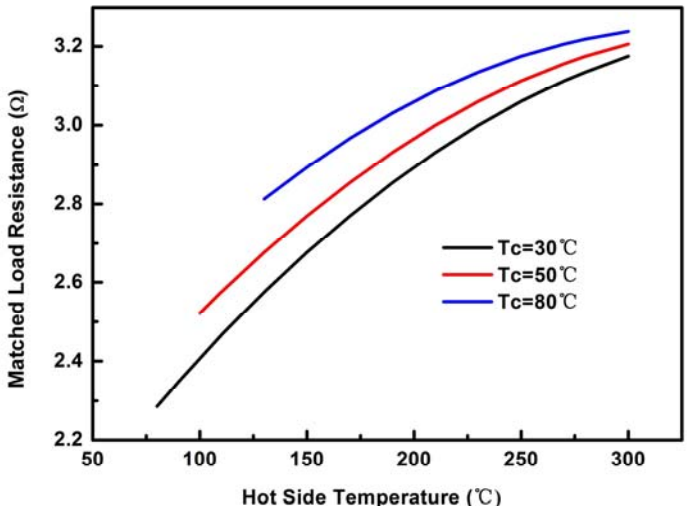
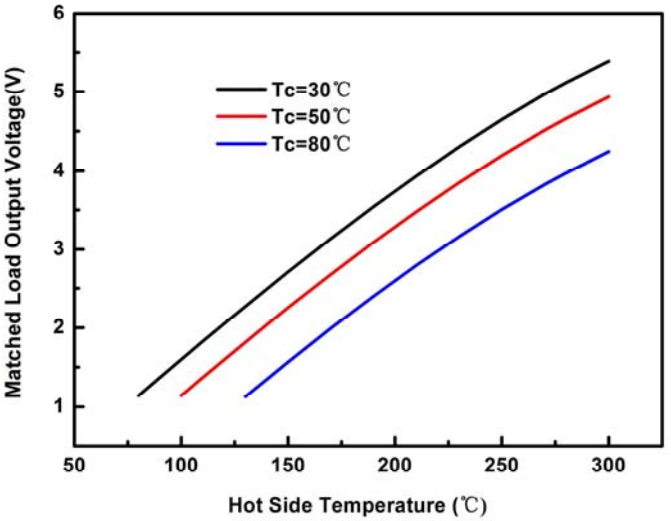


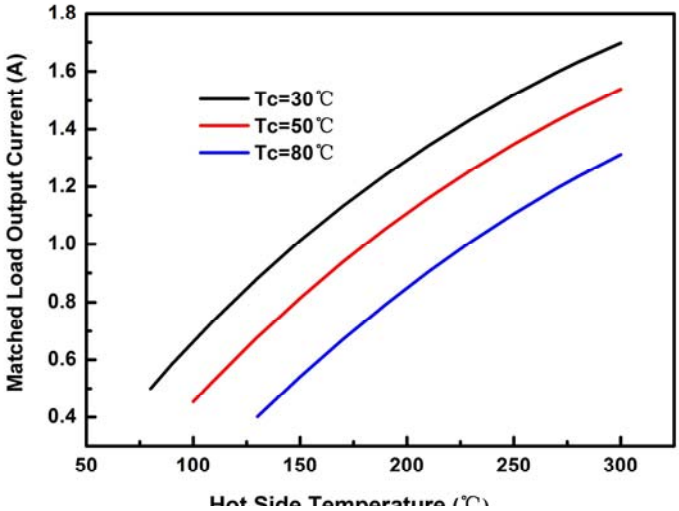
The chart for output voltage Vs T_h under various T_c



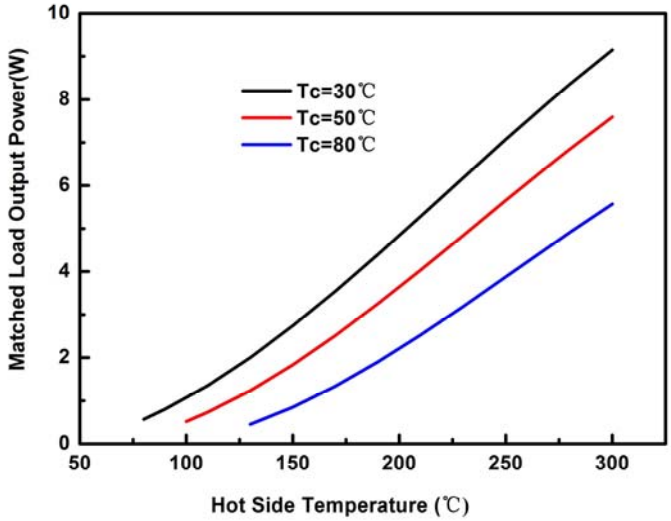
The chart for matched load resistance Vs T_h under various T_c



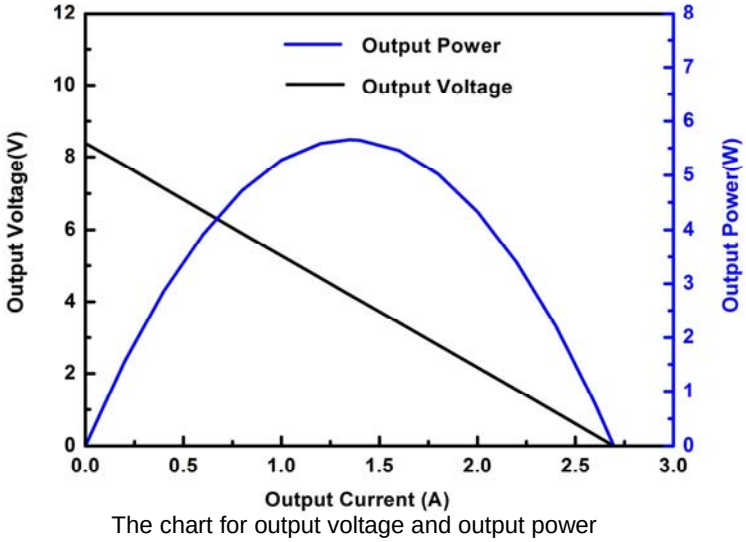
The chart for matched load voltage Vs T_h under various T_c



The chart for matched load current Vs T_h under various T_c



The chart for matched load voltage Vs T_h under various T_c



The chart for output voltage and output power
Vs output current under T_h=250℃ and T_c=50℃