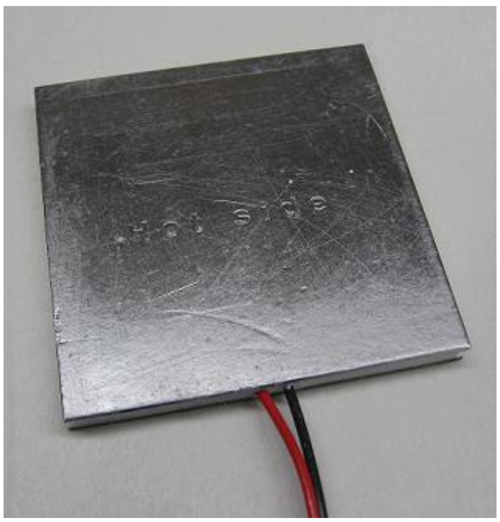
CARBON REDUCING TECHNOLOGY

MODULE TEG1-PB-12611-6.0

OPERATING PARAMETERS:

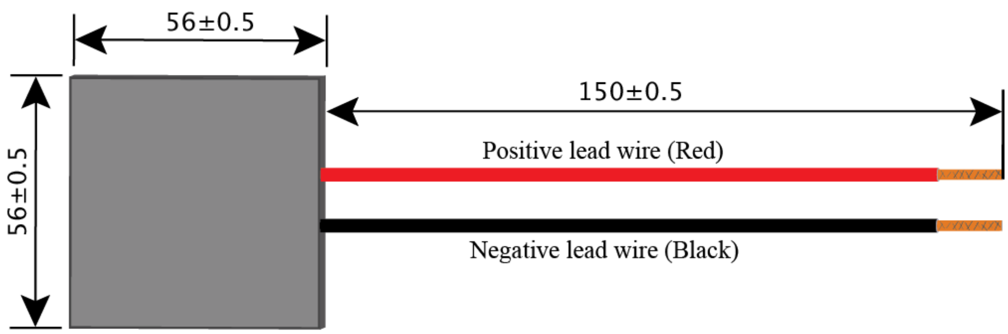
Seebeck Effect thermoelectric power modules are design with high temperature bonding materials that allow them to withstand temperatures of up to 360°C (680°F). As long as the module is placed into a system, whereby the hot side is at a higher temperature than the cold side, DC power will be produced. A unique new class of module is now available. Incorporating 2 optimized semi-conductors of N-type A material & P-type A material to form a **hybrid module** of superior performance & temperature stability. The TEG1-PB class of module is able to operate continuously in higher temperatures than traditional BiTe material only. The ceramic surfaces are equipped with graphite sheets, which displace the need for thermal grease. These novel modules work best in the 220 to 360C Temperature range and offer superior performance over 260C hot side, compared to standard BiTe modules.

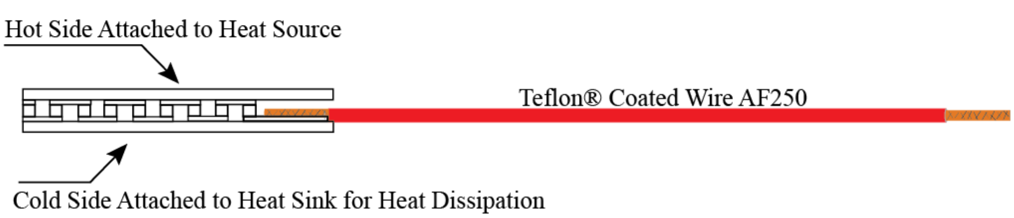


Module Specifications

Hot Side Temperature (˚C)	350
Cold Side Temperature (˚C)	30
Open Circuit Voltage (V)	9.2
Matched Load Resistance (ohms)	0.97
Matched Load Output Voltage (V)	4.6
Matched Load Output Current (A)	4.7
Matched Load Output Power (W)	21.7
Heat Flow Across the Module (W)	≈310
Heat Flow Density (W cm^{-2})	≈9.88
AC Resistance (ohms) Measured under 27 ˚C @ 1000 Hz	0.42~0.52

Geometric Characteristics (Dimensions In Millimeters)





TEC
SOLIDSTATE POWER GENERATORS

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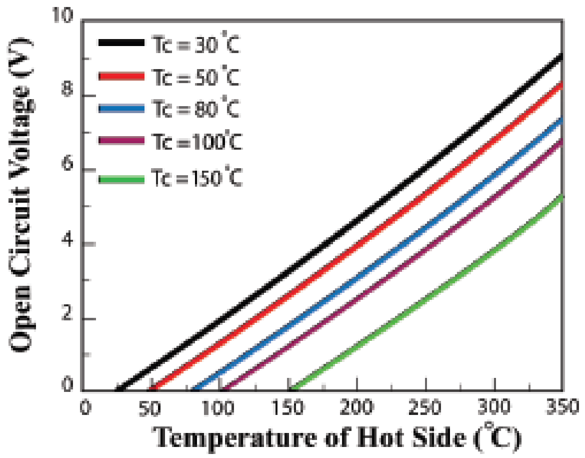
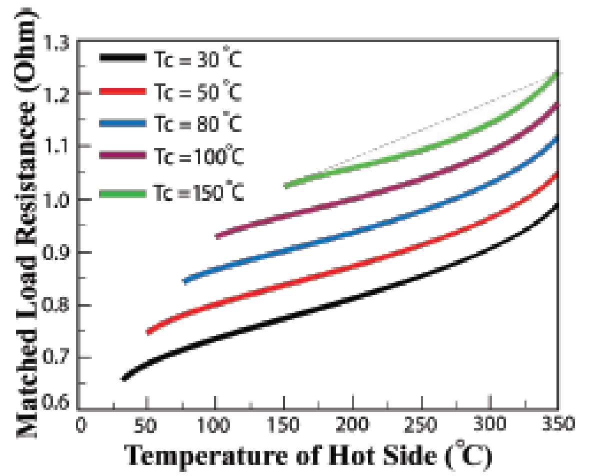
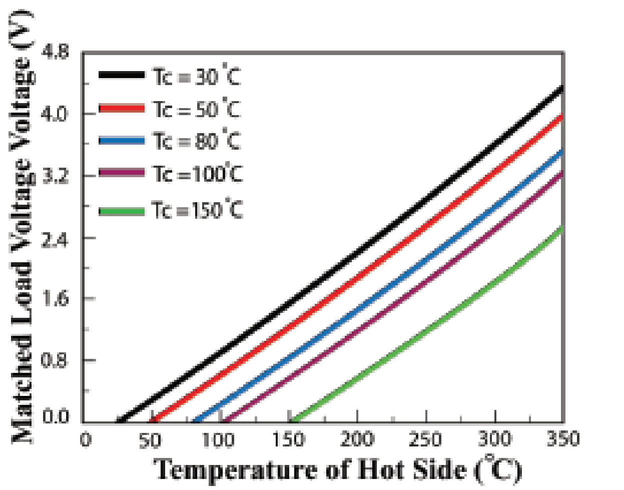
PERFORMANCE CURVES:



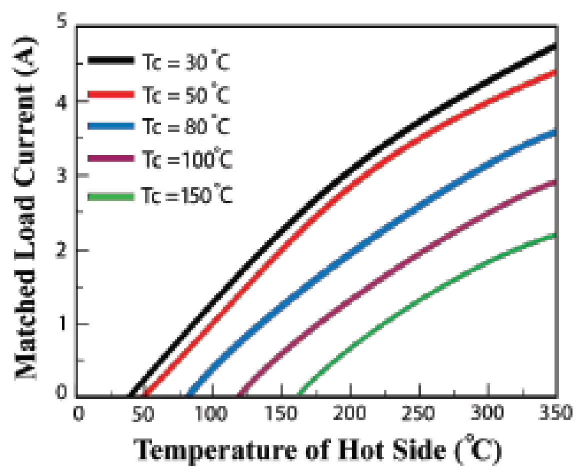
This chart shows open circuit voltage V_s T_h under various T_c .



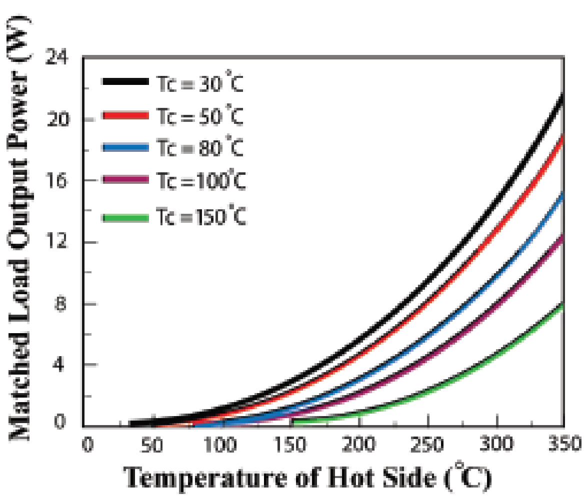
This graph shows open circuit voltage V_s T_h under various T_c .



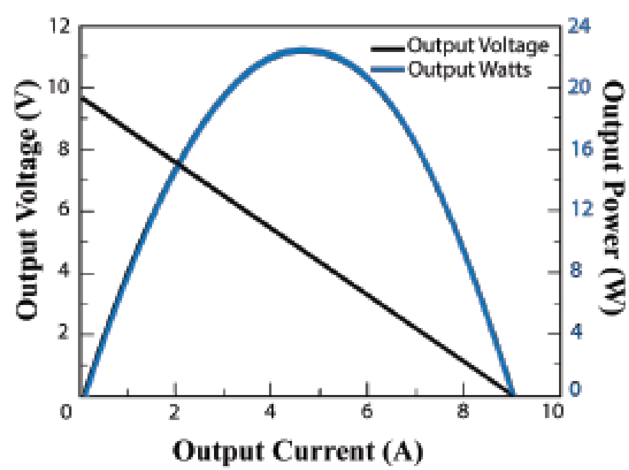
This chart shows the matched load voltage V_s T_h under various T_c.



This chart shows the matched load voltage V_s T_h under various T_c .



This chart shows the matched load output power V_s T_h under various T_c .



This chart shows output voltage and output power where V_s is output current under T_h = 300°C and T_c = 30°C