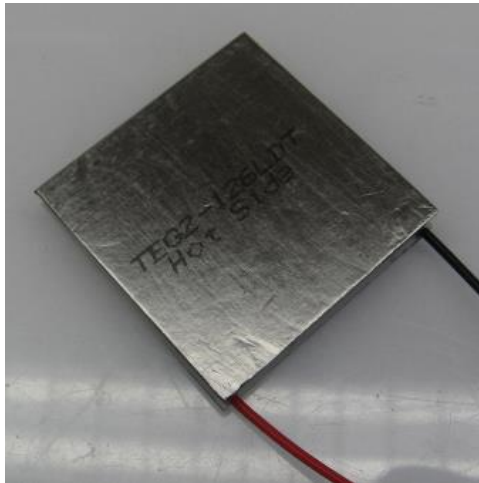


## Specifications Wearables/Harvesting Module TEG2-126LDT

### Description

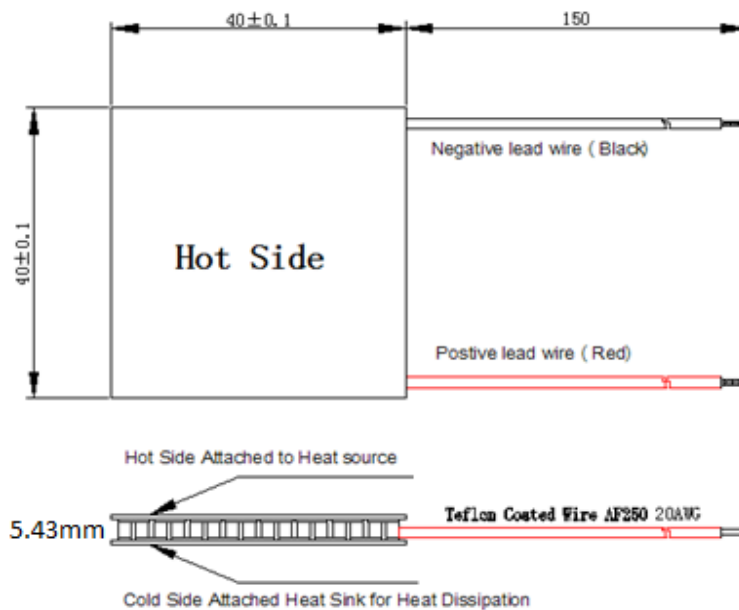
The TEG1-126LDT Scavenger module is designed and manufactured specifically for converting low heat sources directly into electricity. The Bi<sub>2</sub>Te<sub>3</sub> based module is doped specifically for low temperature DT (delta temperature), efficiently converting low DT temperatures into electricity. The module is constructed with high thermal conductivity graphite sheets on both sides of the ceramic plates, and extra high element legs.



Hot Side Temperature (°C)	200
Cold Side Temperature (°C)	30
Open Circuit Voltage (V)	8.6
Matched Load Resistance (ohms)	6.0
Matched load output voltage	4.3
Matched load output current	0.7
Matched load output power	3.0
Heat flow across the module	52
Heat flow density (W cm <sup>-2</sup> )	3.25
AC Resistance (ohms) Measured	3.8-4.2
Size of the module (mm)	40 × 40 × 5.1 <sup>±0.1</sup>

We offer a smaller 30x30mm TEG1-126LDT30, please email at [tecteg@rogers.com](mailto:tecteg@rogers.com)

### Geometric Characteristics Dimensions in millimeter



Quality control: Its AC Resistance should be within range of 3.8 - 4.2 Ohm under 27 °C.

## Performance Curves of Scavenger Module

### TEG2-126LDT

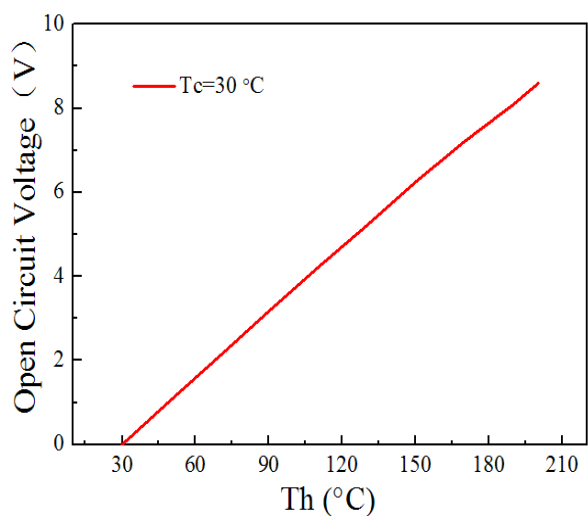


Chart for open circuit voltage s  $T_h$  at  $T_c=30$  °C

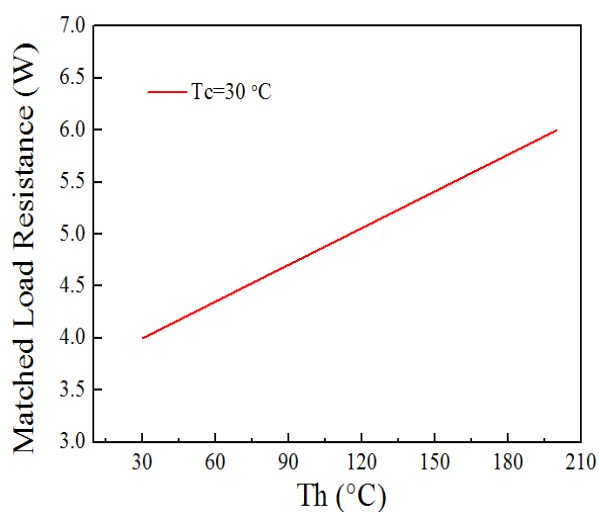
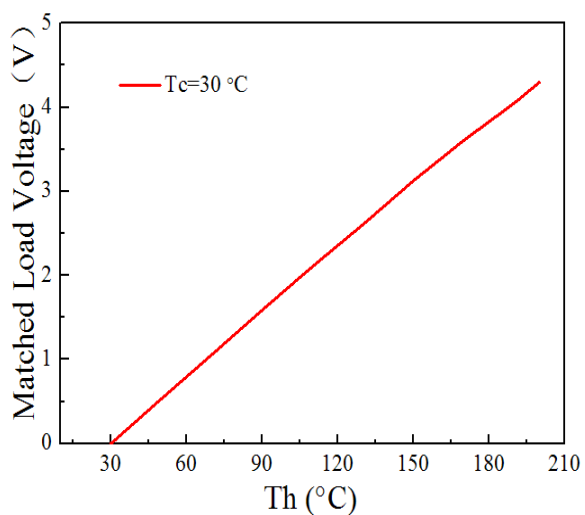
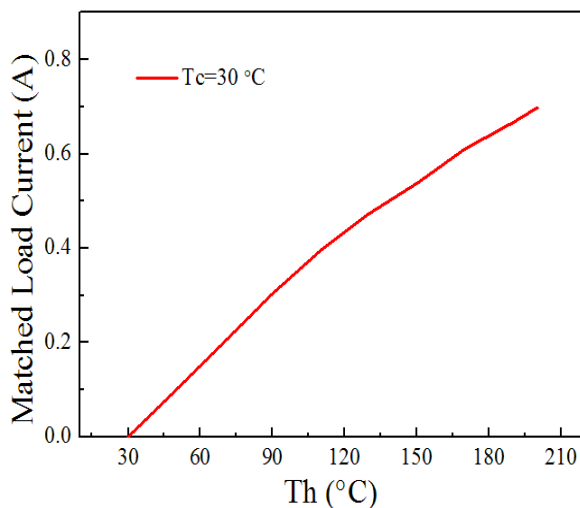


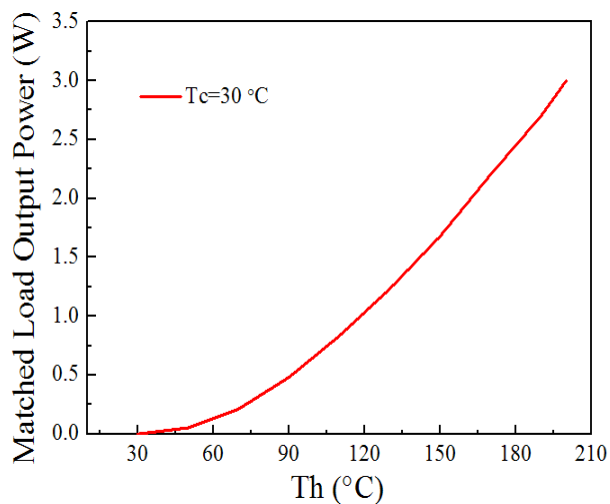
Chart for matched load resistance vs  $T_h$  at  $T_c=30$  °C



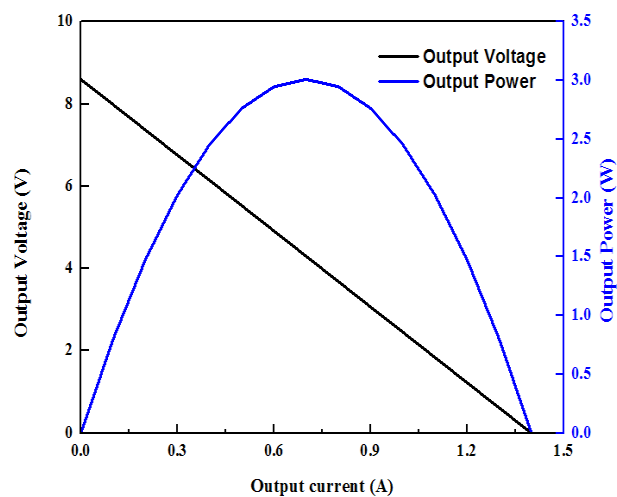
Matched load voltage vs  $T_h$  at  $T_c=30$  °C



Matched load current vs  $T_h$  at  $T_c=30$  °C



Matched load output power vs  $T_h$  at  $T_c=30$  °C



Output voltage & output power vs output current under  $T_h=200$  °C



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& Tc=30 °C

Additional specifications for compressed DT's

**Very low DT test results**

**Th=40, Tc=30C, Voltage at match load 0.6V, Amps at match load: 0.03A, Match load 4.5Ω**

**Th=60, Tc=30C, Voltage at match load 1.2V, Amps at match load: 0.07A, Match load 5.2Ω**

**Th=80, Tc=30C, Voltage at match load 1.5V, Amps at match load: 0.12A, Match load 6.0Ω**

**Th=40, Tc=20C, Voltage at match load 1.0V, Amps at match load: 0.04A, Match load 5.0Ω**

**Th=30, Tc=10C, Voltage at match load 1.0V, Amps at match load: 0.04A, Match load 5.0Ω**

Features of the Low DT scavenger device:

1. Constructed with a high temperature bonding material to take advantage of elevated but low DT's up to 200°C.
2. The scavenger module is designed to slow down heat flow to avoid saturation of the heat removal side, a critical feature of low DT designs to be successful.

**We offer a smaller 30 x 30mm TEG1-126LDT30, email at [tecteg@rogers.com](mailto:tecteg@rogers.com)**

Smaller devices than above can be designed and manufactured.

Please email us at [tecteg@rogers.com](mailto:tecteg@rogers.com) for pricing and delivery.

Typical custom manufactured devices take 3 to 4 weeks to manufacture.