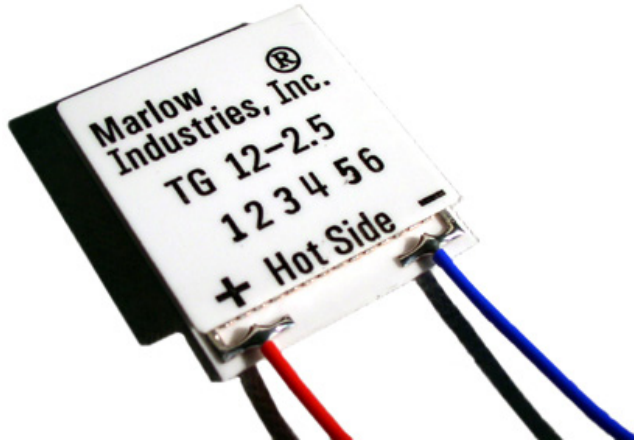




Technical Data Sheet for TG12-2.5

Single-Stage Thermoelectric Generator



NOMINAL PERFORMANCE IN NITROGEN

Cold Side Temperature (°C)	27±2
AC Resistance (ohms):	4.47 – 5.69
Device ZT	0.72

PRODUCT FEATURES

- RoHS EU Compliant
- Rated operating temperature of 200°C.
- Ceramic Material: Aluminum Oxide.
- Porch configuration for high strength leadwire connection.
- Superior nickel diffusion barriers on elements.
- High strength for rugged environment.
- RTV sealing option available.
- Lapped option available for multiple module applications.

ORDERING OPTIONS

Model Number	Description
TG12-2.5-01	102 mm Leadwires
TG12-2.5-01L	102 mm Leadwires, Lapped
TG12-2.5-01S	102 mm Leadwires, Sealed
TG12-2.5-01LS	102 mm Leadwires, Lapped, Sealed
TG12-2.5-02LS	200 mm Leadwires, Lapped, Sealed

OPERATION CAUTIONS

For maximum reliability, continuous operation below 200°C (cold side and hot side) is recommended. Intermittent operation up to 230°C on the hot side of the TG is permissible.

INSTALLATION

Recommended mounting methods: Clamp with uniform pressure to a flat surface with thermal interface material. Recommend 1.4 MPa (200 psi) with thermal grease or flexible graphite pads. For additional information, please contact an applications engineer.

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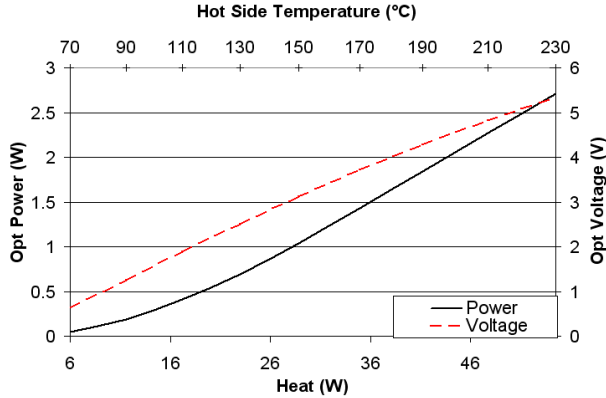


TYPICAL PERFORMANCE CURVES

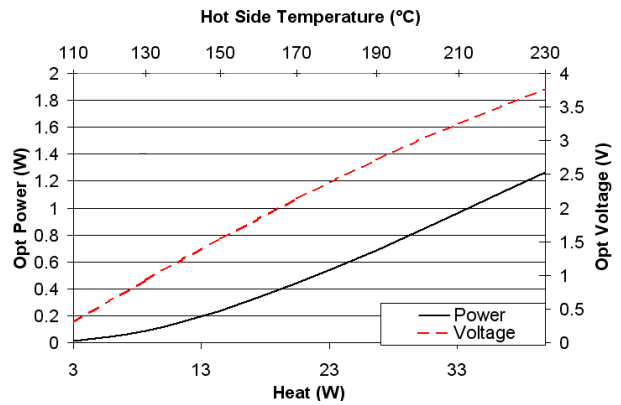
POWER GENERATION PERFORMANCE CURVES

ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN

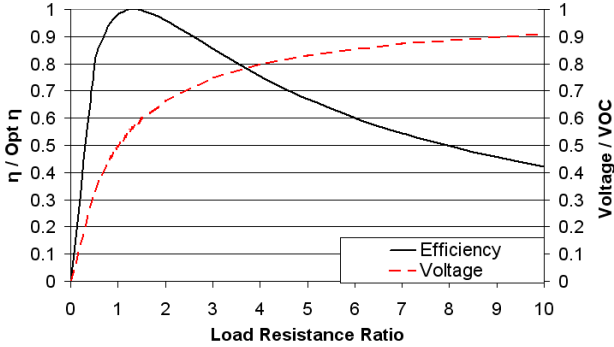
Cold Side Temperature 50°C



Cold Side Temperature 100°C



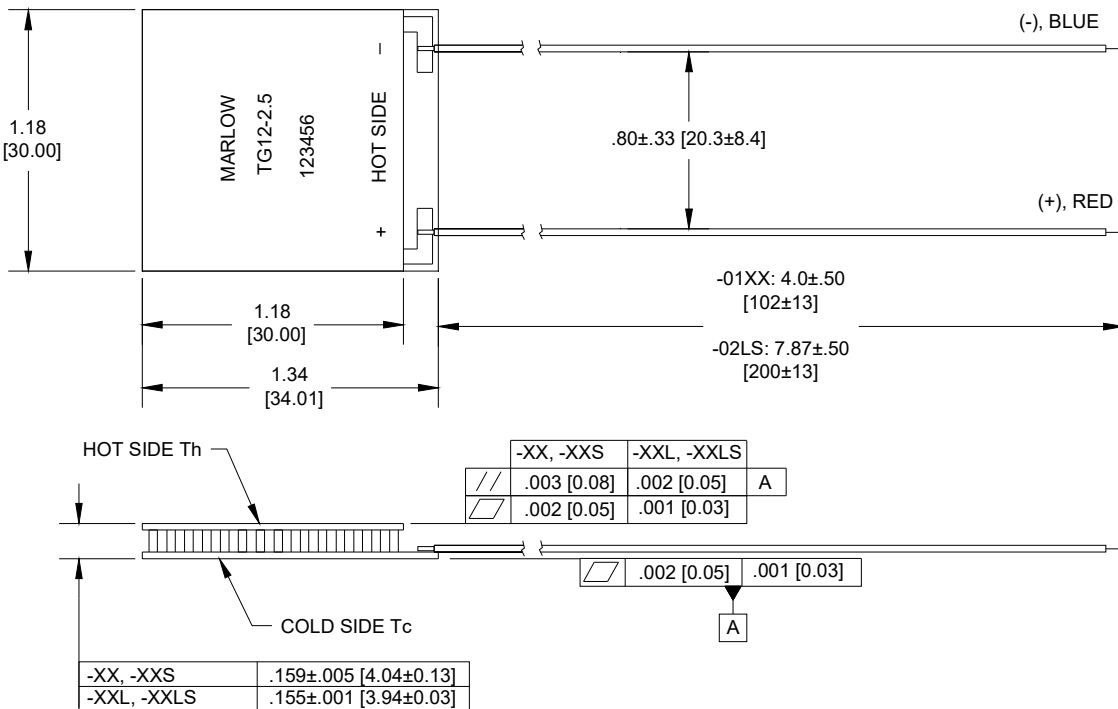
Normalized Off-Peak Performance



Hot Side Temperature (°C)	230	170	110
Cold Side Temperature (°C)	50	50	50
Optimum Efficiency, η (%)	5.02	4.14	2.43
Optimum Power (W)	2.71	1.43	0.41
Optimum Voltage (V)	5.33	3.71	1.89
Load Resistance for Opt η (Ω)	10.47	9.68	8.75
Open Circuit Voltage, VOC (V)	9.56	6.57	3.31
Closed Circuit Current (A)	1.14	0.88	0.50
Thermal Resistance (°C/W)	3.33	3.48	3.58

For performance information with cold side temperatures other than 50°C or 100°C, contact one of our Applications Engineers at 877-627-5691.

MECHANICAL CHARACTERISTICS



All units are in inches. All units in [] are in millimeters.

For customer support or general questions please contact a local office or visit our website at www.marlow.com.

Marlow reserves the right to make product changes without notice.