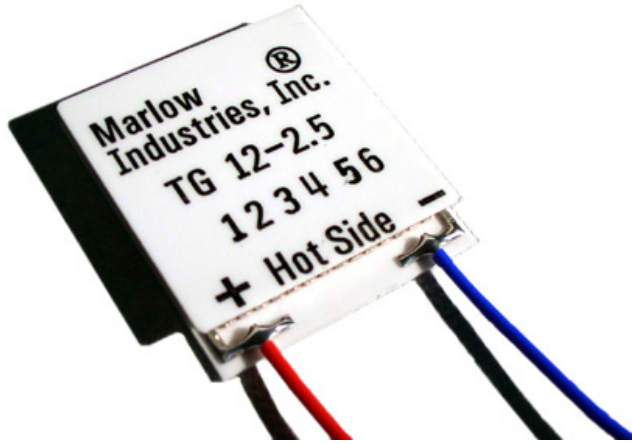




Technical Data Sheet for TG12-2.5

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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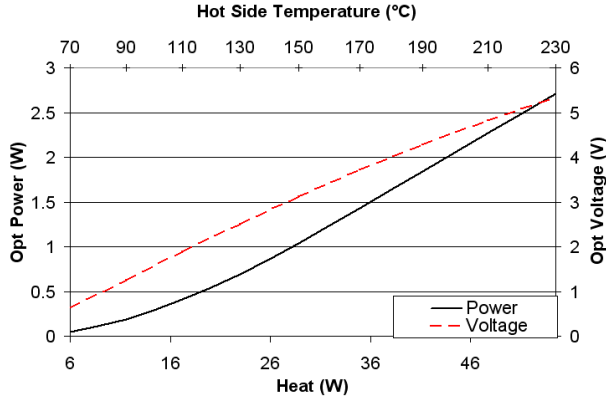


TYPICAL PERFORMANCE CURVES

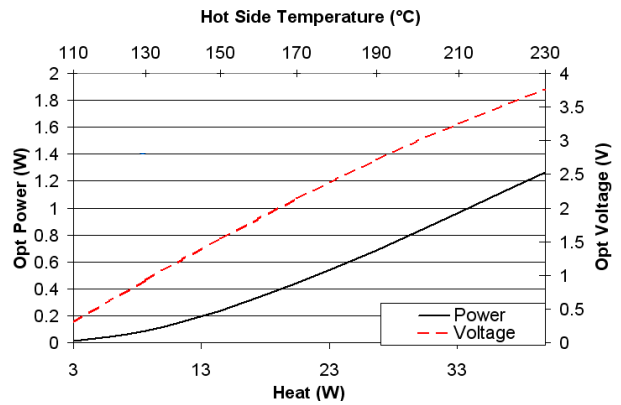
POWER GENERATION PERFORMANCE CURVES

ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN

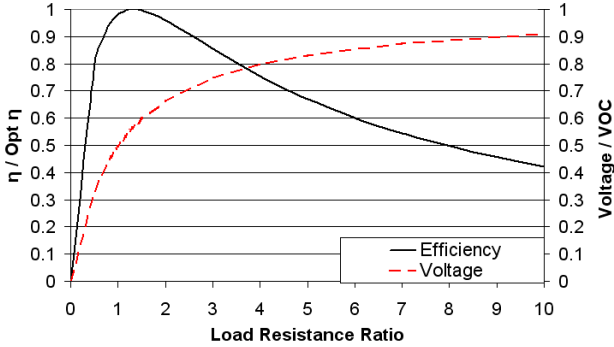
Cold Side Temperature 50°C



Cold Side Temperature 100°C



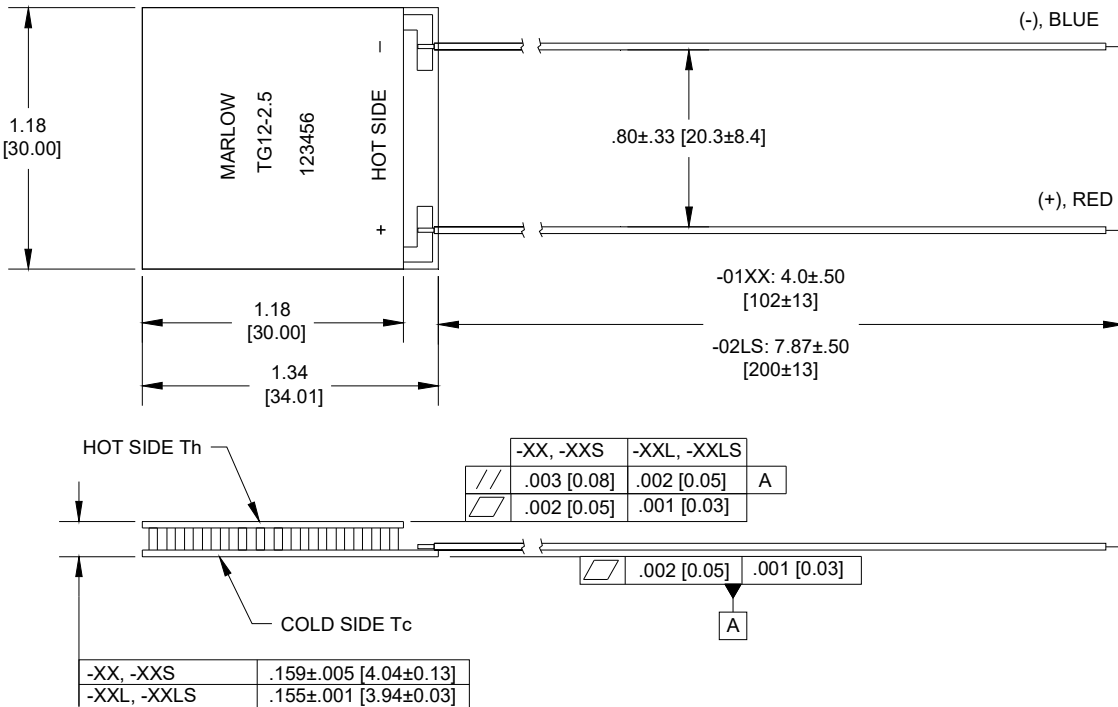
Normalized Off-Peak Performance



| | | | |
|---|-------|------|------|
| 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.