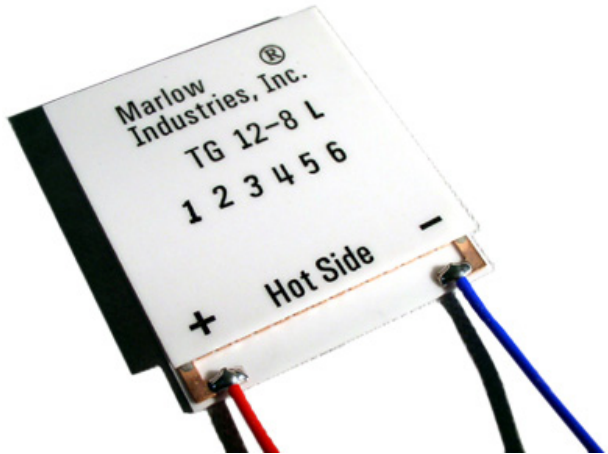




Technical Data Sheet for TG12-8

Single-Stage Thermoelectric Generator



NOMINAL PERFORMANCE IN NITROGEN

Cold Side Temperature (°C)	27±2
AC Resistance (ohms):	1.36 – 1.69
Device ZT	0.73

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
TG12-8-01	Leadwires
TG12-8-01L	Leadwires, Lapped
TG12-8-01S	Leadwires, Sealed
TG12-8-01LS	Leadwires, Lapped, Sealed
TG12-8-01G	Leadwires, Graphite Pads
TG12-8-01LG	Leadwires, Lapped, Graphite Pads
TG12-8-01SG	Leadwires, Sealed, Graphite Pads
TG12-8-01LSG	Leadwires, Lapped, Sealed, Graphite Pads

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. Recommended 1.4 MPa (200 psi) with thermal grease or flexible graphite pads. For additional information, please contact an applications engineer.

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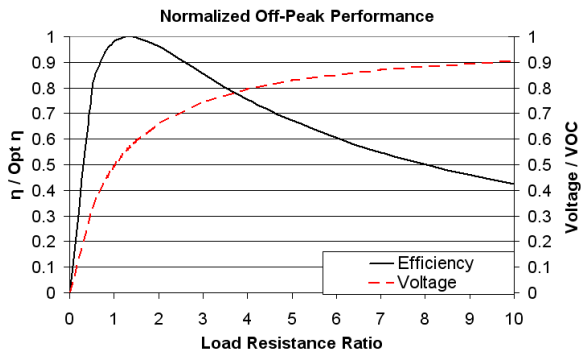
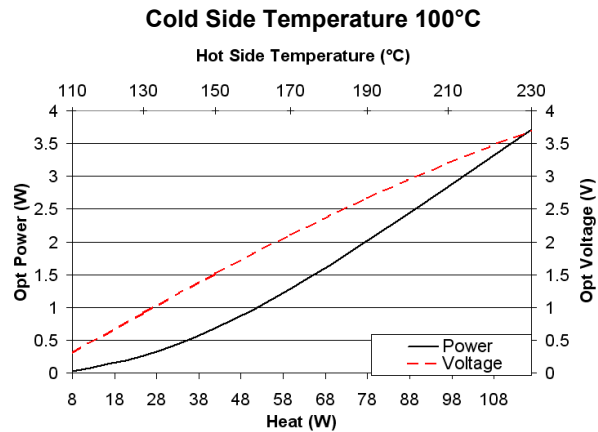
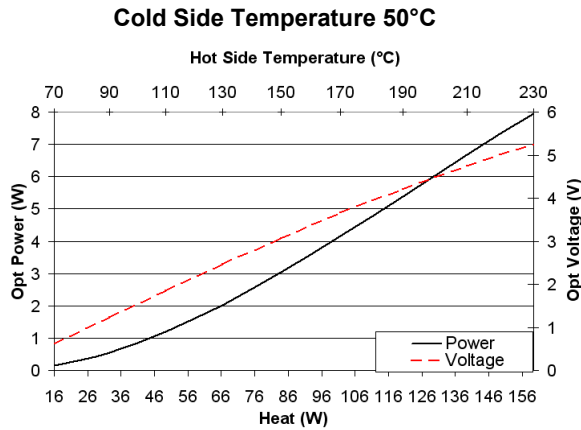
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TYPICAL PERFORMANCE CURVES

POWER GENERATION PERFORMANCE CURVES

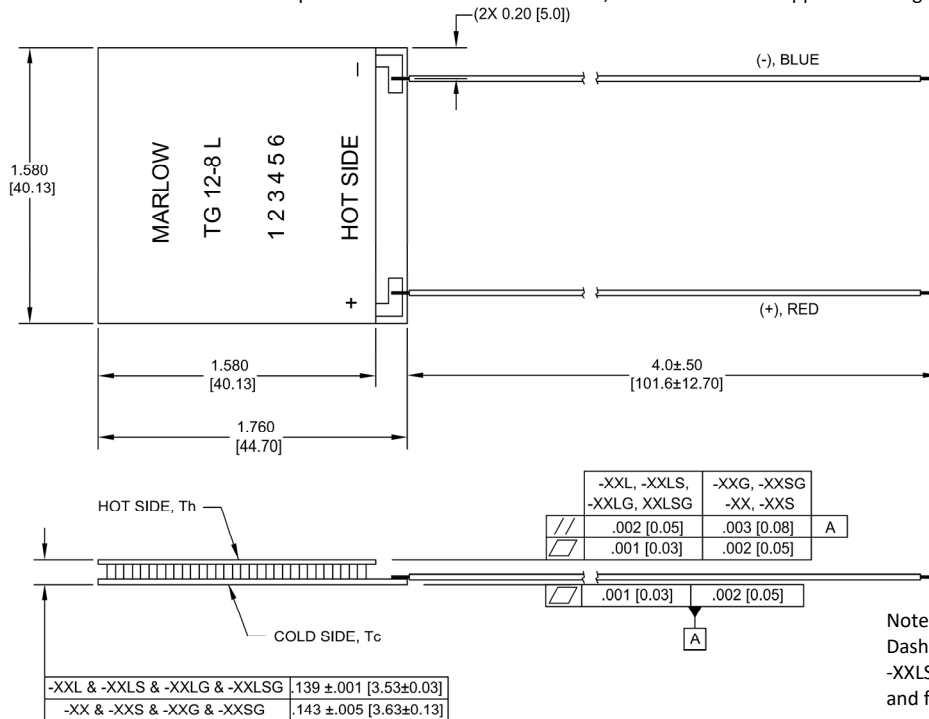
ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN



Hot Side Temperature (°C)	230	170	110
Cold Side Temperature (°C)	50	50	50
Optimum Efficiency, η (%)	4.97	4.08	2.39
Optimum Power (W)	7.95	4.17	1.19
Optimum Voltage (V)	5.25	3.65	1.86
Load Resistance for Opt η (Ω)	3.46	3.20	2.90
Open Circuit Voltage, VOC (V)	9.43	6.48	3.27
Closed Circuit Current (A)	3.38	2.60	1.48
Thermal Resistance (°C/W)	1.13	1.17	1.20

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

MECHANICAL CHARACTERISTICS



Note:
Dash -XXG, -XXLG, -XXSG,
-XXLSG: Height, parallelism,
and flatness dimensions are
measured before adding
graphite pads.

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.