Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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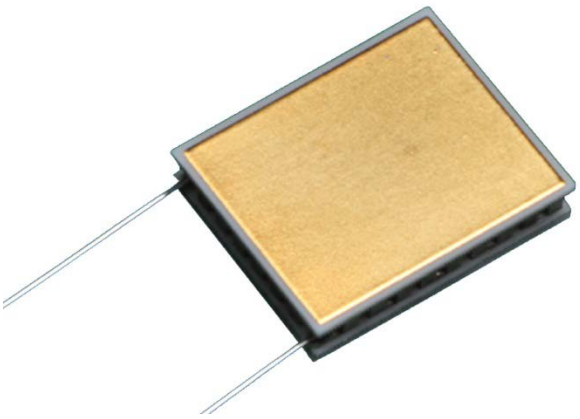
Technical Data Sheet for NL1015T

Single-Stage Thermoelectric Module



NOMINAL PERFORMANCE IN NITROGEN

Hot Side Temperature (°C)	27	50
Δ Tmax (°C):	61	69
Qmax (watts):	2.6	3.0
Imax (amps):	1.0	1.0
Vmax (vdc):	4.6	5.3
AC Resistance (ohms):	4.07	--
Device ZT	0.77	--

PRODUCT FEATURES

- RoHS EU Compliant
- Ceramic Material: Aluminum Oxide
- -01AC, -02AC: External Metallization is Au flash, suitable for soldering.
- Maximum process temperature is 120°C.

ORDERING OPTIONS

Model Number	Description
NL1015T-01AC	Both Surfaces are Metallized
NL1015T-02AC	Hot Side Exterior is Metallized
NL1015T-03AC	No Metallization

OPERATION CAUTIONS

For maximum reliability, storage and operation below 100°C in a non-condensing environment is recommended. To minimize thermal stress when operating in cooling mode, use linear/proportional temperature control or a similar method rather than an ON/OFF method.

INSTALLATION

Recommended mounting methods: Bonding with thermal epoxy or soldering with metallized ceramics. For additional information, please refer to our TEC Installation Guide.

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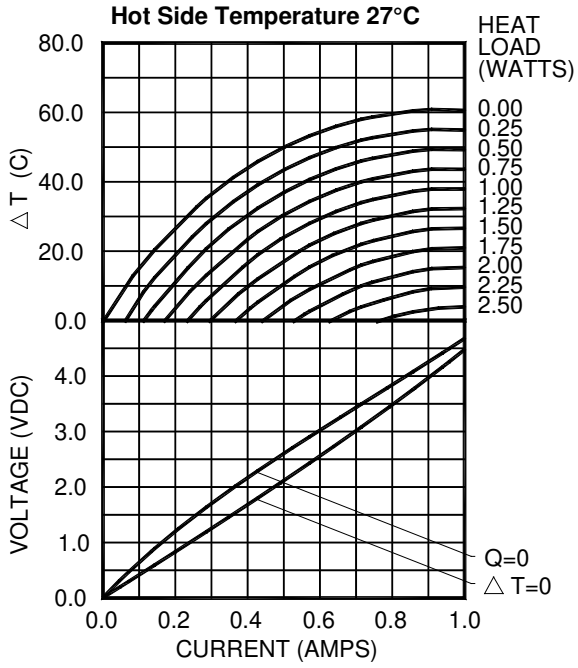
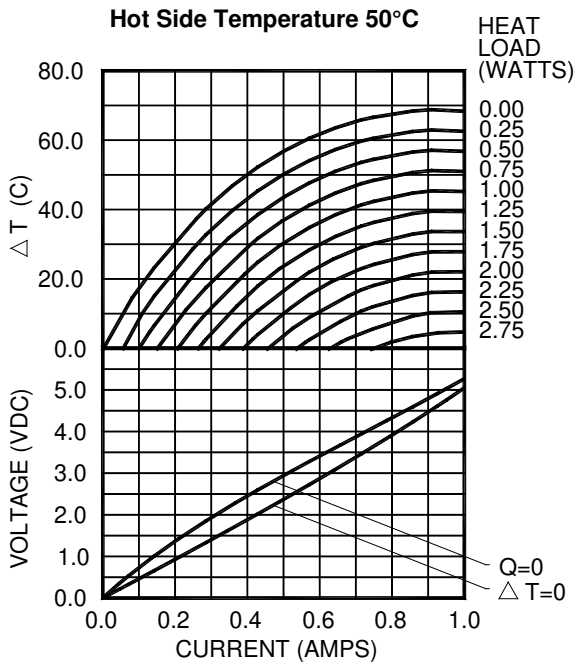
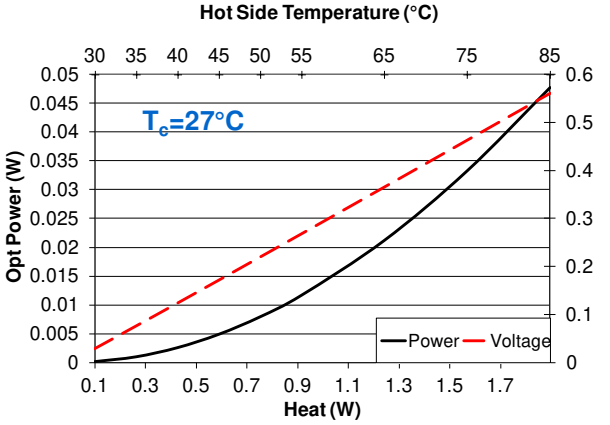
TYPICAL PERFORMANCE CURVES

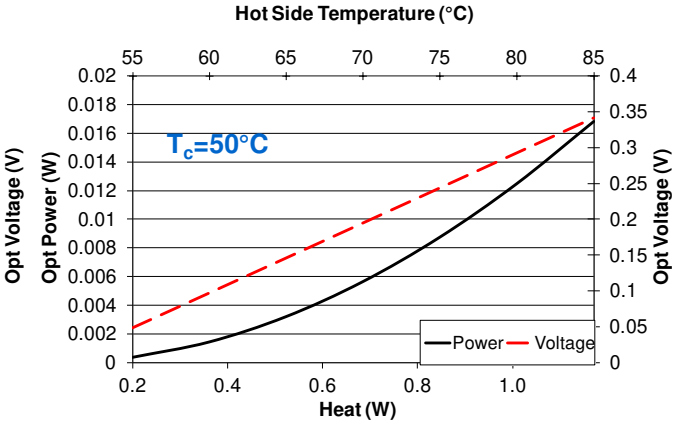
ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN

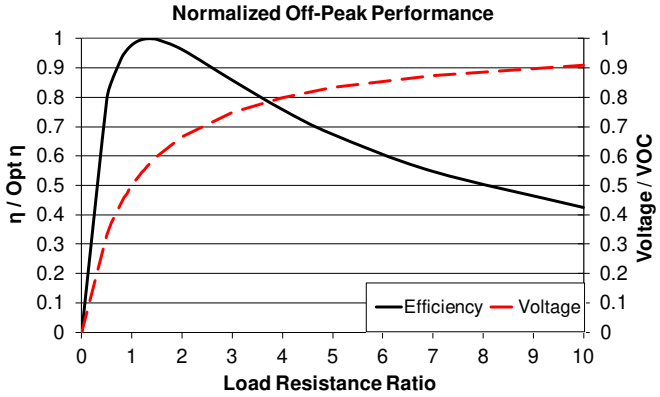




POWER GENERATION PERFORMANCE CURVES



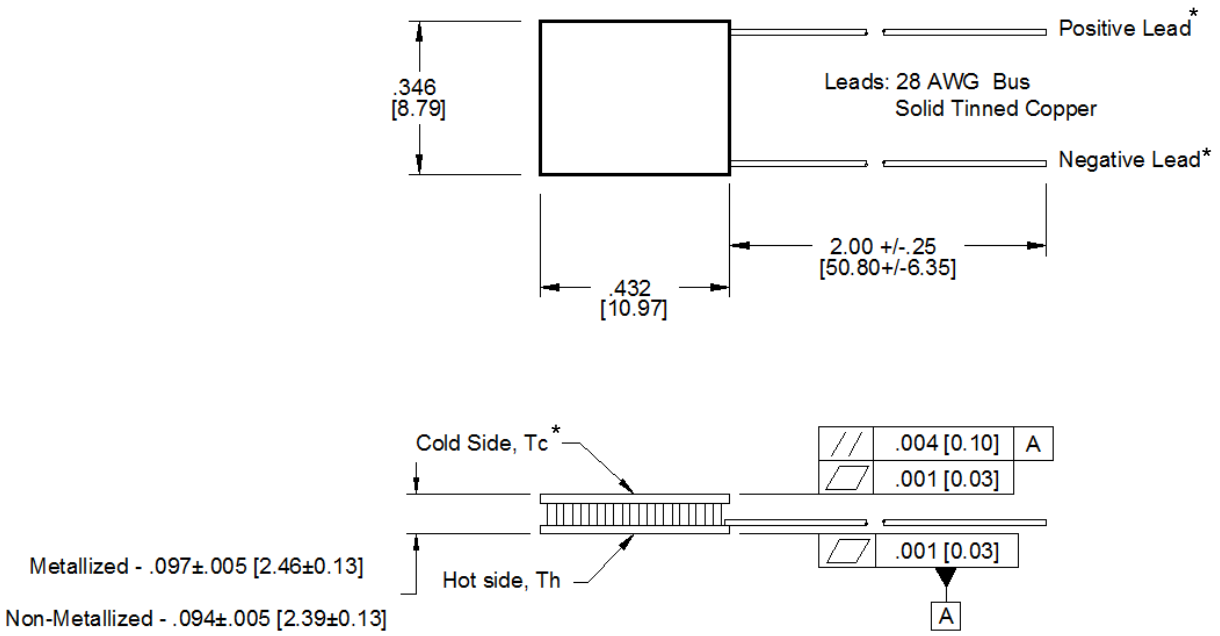




Hot Side Temperature (°C)	85	55	35
Cold Side Temperature (°C)	27	27	27
Optimum Efficiency, η (%)	2.52	1.28	0.37
Optimum Power (W)	0.048	0.012	0.001
Optimum Voltage (V)	0.561	0.268	0.076
Load Resistance for Opt η (Ω)	6.59	6.15	5.85
Open Circuit Voltage, VOC (V)	0.98	0.47	0.13
Short Circuit Current (A)	0.20	0.10	0.03
Thermal Resistance (°C/W)	30.64	30.68	30.63

For performance information in a vacuum or with hot side temperatures other than 27°C or 50°C, contact one of our Applications Engineers at 877-627-5691.

MECHANICAL CHARACTERISTICS



Dimensions are in inches, and millimeters are in [ ].

***NOTE: Cold side and positive and negative leads are valid only for thermoelectric cooling. For power generation, refer to figure below.**

Power Generation performance information is given in a nitrogen environment and cold side temperatures of 27°C and 50°C. Module temperature does not include thermal resistance of heat sinks. For performance information in vacuum, other cold side temperatures, or specific heat sinks, consult one of our applications engineers.

TYPICAL POWER GENERATION CONFIGURATION

EXAMPLE: