



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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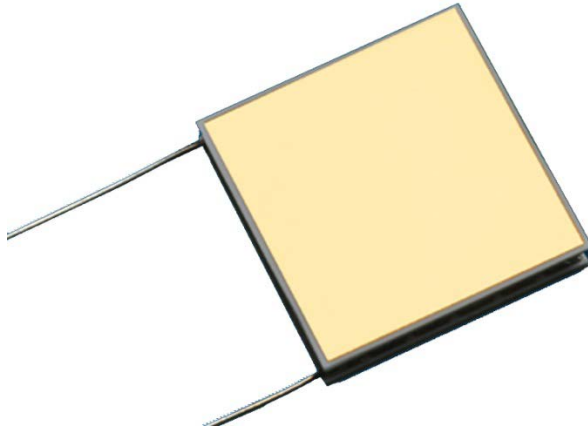
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Technical Data Sheet for NL1023T

Single-Stage Thermoelectric Module



NOMINAL PERFORMANCE IN NITROGEN

Hot Side Temperature (°C)	27	50
ΔT_{max} (°C):	64	73
Q _{max} (watts):	9.2	10.5
I _{max} (amps):	1.8	1.8
V _{max} (vdc):	8.0	9.0
AC Resistance (ohms):	3.86	--
Device ZT	0.77	--

PRODUCT FEATURES

- RoHS EU Compliant
- Rated operating temperature of 130°C.
- Pre-tinned metallized ceramic surface(s) with 138°C solder, option available.

ORDERING OPTIONS

Model Number	Description
NL1023T-01AC	TEM, Top and Base Metallized Exterior
NL1023T-02AC	TEM, Base Metallized Exterior
NL1023T-03AC	TEM, No Metallized Exterior
NL1023T-04AC	TEM, Top and Base Pre-Tinned with 138 °C Solder

OPERATION CAUTIONS

For maximum reliability, storage and operation below 85°C in a non-condensing environment is recommended. To minimize thermal stress, 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 TEM Installation Guide.

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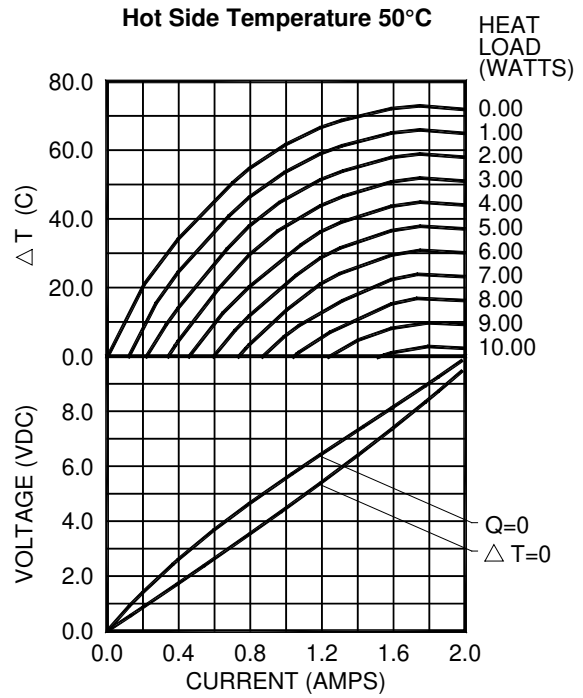
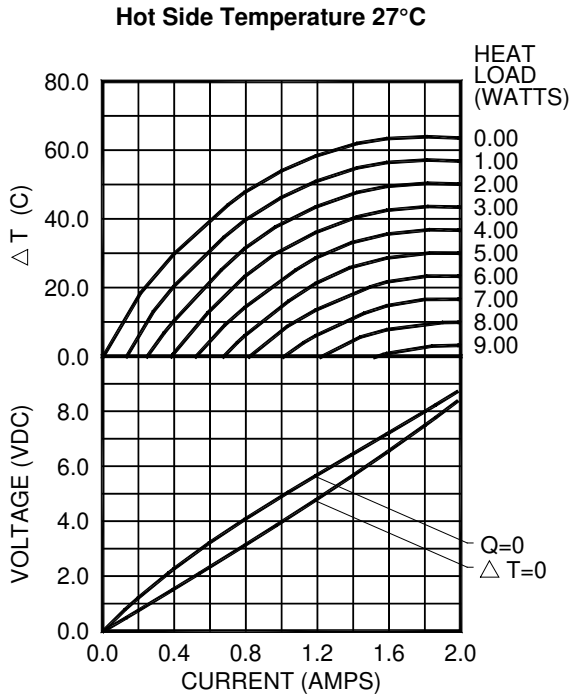
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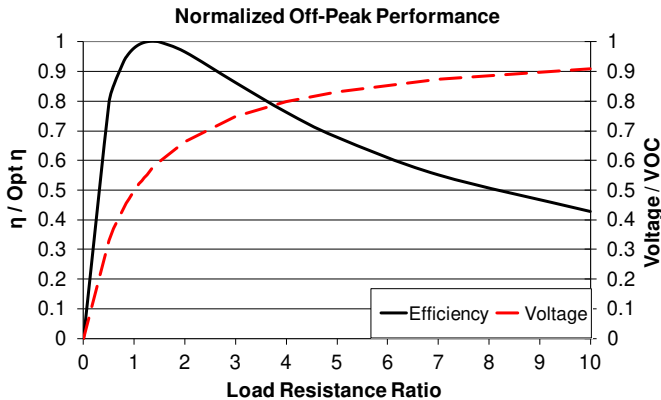
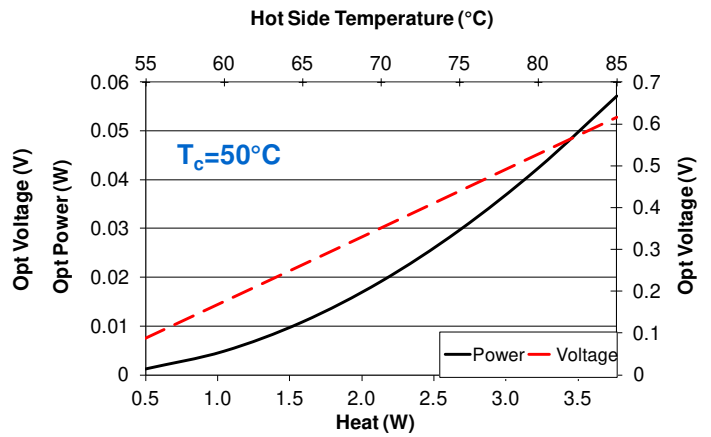
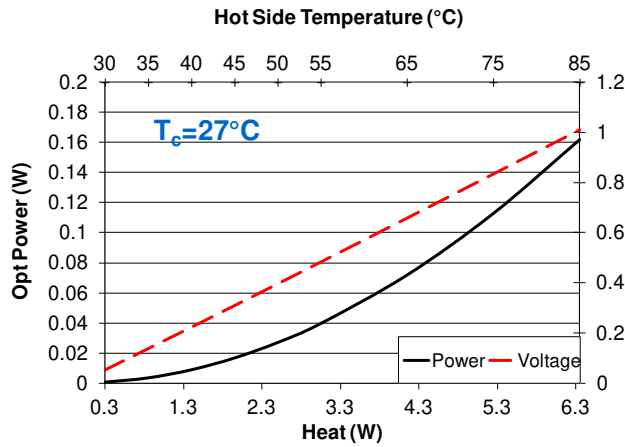
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ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN

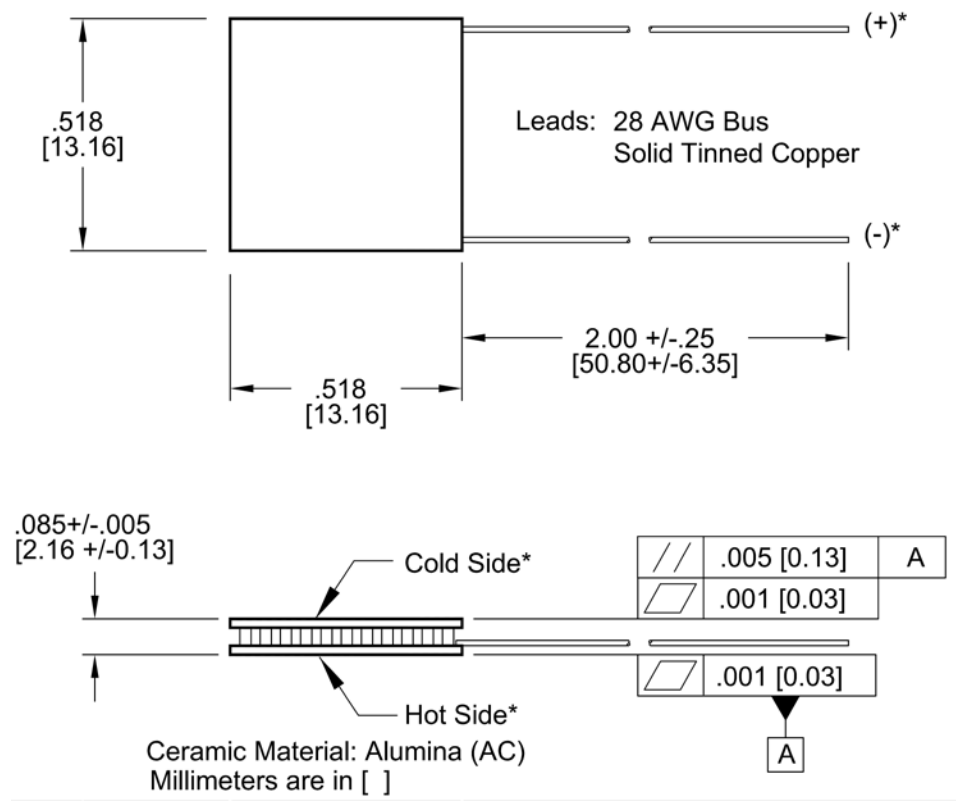


POWER GENERATION PERFORMANCE CURVES

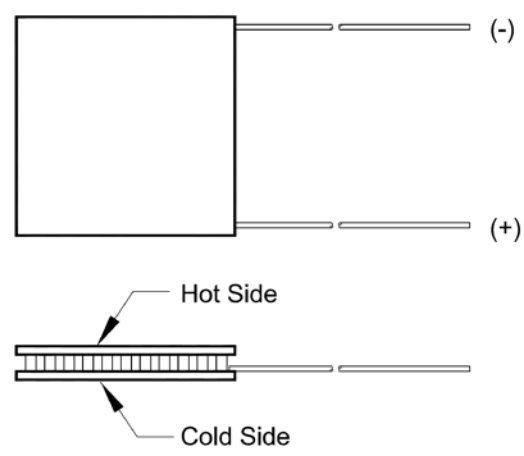


Hot Side Temperature (°C)	85	55	35
Cold Side Temperature (°C)	27	27	27
Optimum Efficiency, η (%)	2.53	1.28	0.37
Optimum Power (W)	0.162	0.039	0.003
Optimum Voltage (V)	1.011	0.482	0.136
Load Resistance for Opt η (Ω)	6.32	5.91	5.62
Open Circuit Voltage, VOC (V)	1.77	0.85	0.24
Short Circuit Current (A)	0.37	0.19	0.06
Thermal Resistance (°C/W)	9.09	9.09	9.06

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.



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



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