Technical Data Sheet for NL1021T

Single-Stage Thermoelectric Module
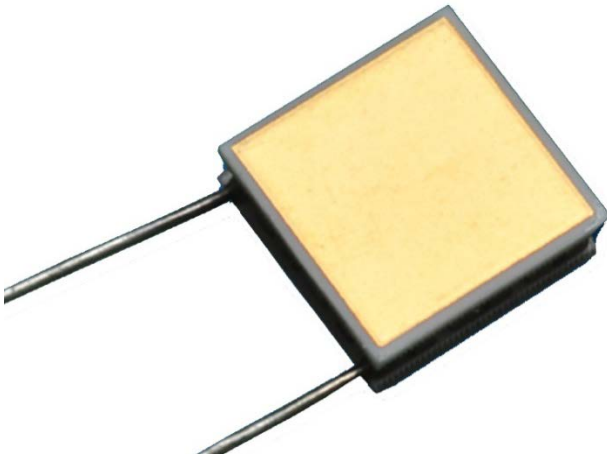
NOMINAL PERFORMANCE IN NITROGEN

Hot Side Temperature (°C)	27	50
Δ Tmax (°C):	64	72
Qmax (watts):	2.2	2.5
Imax (amps):	1.8	1.8
Vmax (vdc):	1.9	2.2
AC Resistance (ohms):	0.92	--

PRODUCT FEATURES

- RoHS EU Compliant
- Ceramic Material: Aluminum Oxide
- -04AC: Thermistor mounted on edge of cold side ceramic. (Calibration available.)
- -01AC, -02AC, -04AC: External Metallization is Au flash, suitable for soldering.
- Maximum process temperature is 120°C.

ORDERING OPTIONS

Model Number	Description
NL1021T-01AC	Both Surfaces are Metallized
NL1021T-02AC	Hot Side Exterior is Metallized
NL1021T-03AC	No Metallization
NL1021T-04AC	Base Exterior Metallization, Cold Side Mounted Thermistor.

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 TEC Installation Guide.

TYPICAL PERFORMANCE CURVES

ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN

Hot Side Temperature 27°C

HEAT LOAD (WATTS)
- 0.00
- 0.25
- 0.50
- 0.75
- 1.00
- 1.25
- 1.50
- 1.75
- 2.00

ΔT (C): 80.0, 60.0, 40.0, 20.0, 0.0
VOLTAGE (VDC): 2.0, 1.6, 1.2, 0.8, 0.4, 0.0
CURRENT (AMPS): 0.0, 0.4, 0.8, 1.2, 1.6, 2.0
Q=0
ΔT=0

Hot Side Temperature 50°C

HEAT LOAD (WATTS)
- 0.00
- 0.25
- 0.50
- 0.75
- 1.00
- 1.25
- 1.50
- 1.75
- 2.00
- 2.25

ΔT (C): 80.0, 60.0, 40.0, 20.0, 0.0
VOLTAGE (VDC): 2.0, 1.6, 1.2, 0.8, 0.4, 0.0
CURRENT (AMPS): 0.0, 0.4, 0.8, 1.2, 1.6, 2.0
Q=0
ΔT=0
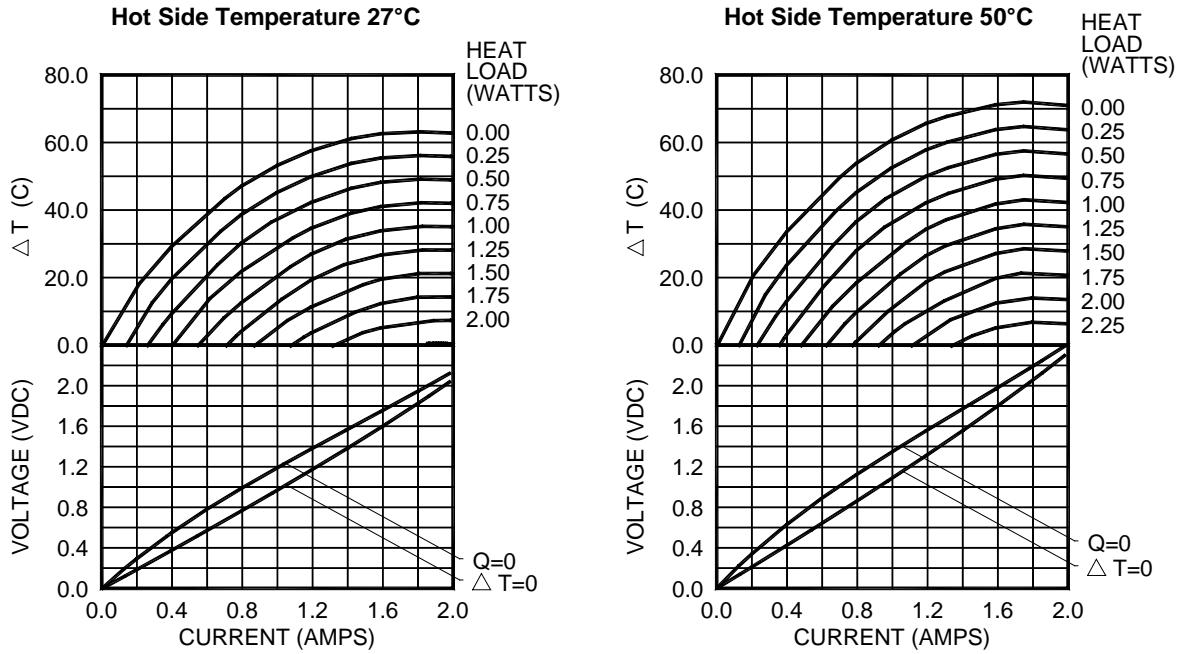
For performance information in a vacuum or with hot side temperatures other than 27°C or 50°C, contact one of our Applications Engineers at 877-627-5691.

MECHANICAL CHARACTERISTICS

-04AC ONLY: Thermistor

Positive Lead

Leads: 28 AWG (0.32) Bus Solid Tinned Copper

Negative Lead

.260 [6.60]

(.31) [7.87]

.260 [6.60]

2.00 ±.25 [50.80 ±6.35]

Cold Side

.085 ±.005 [2.16 ±0.13]

Hot Side

//	.003 [0.08]	A
▱	.001 [0.03]	

▱	.001 [0.03]

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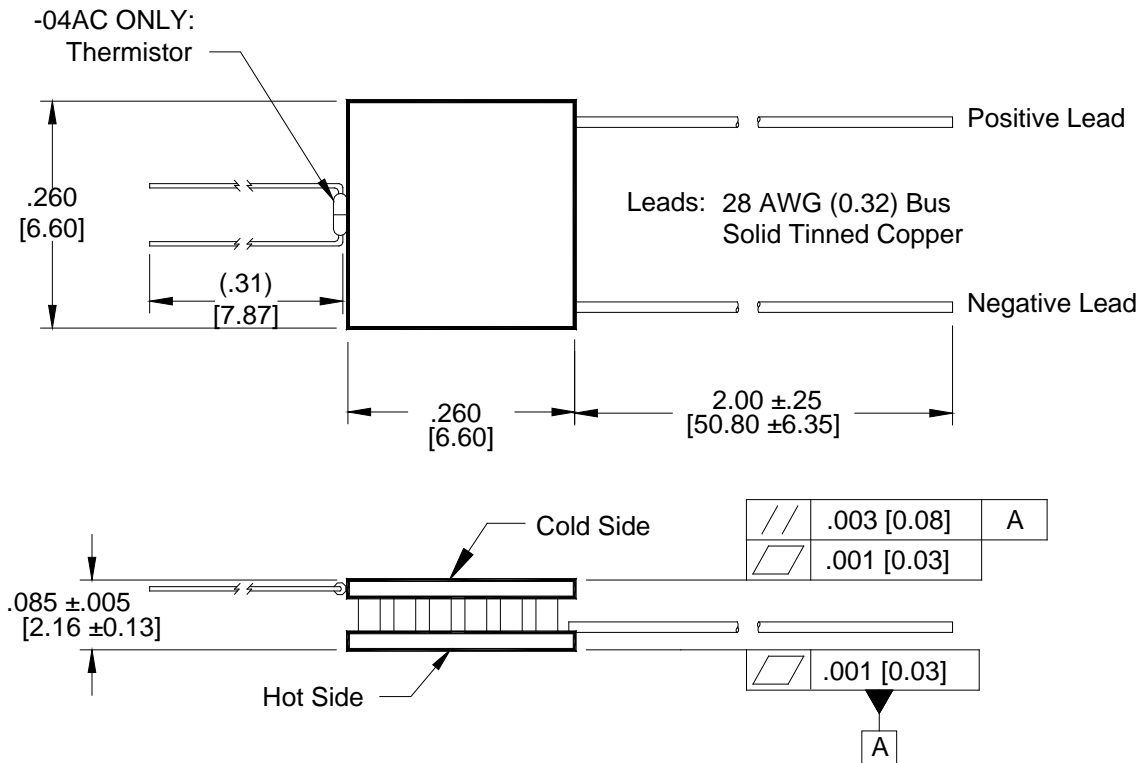
Dimensions are in inches, and millimeters are in [ ].