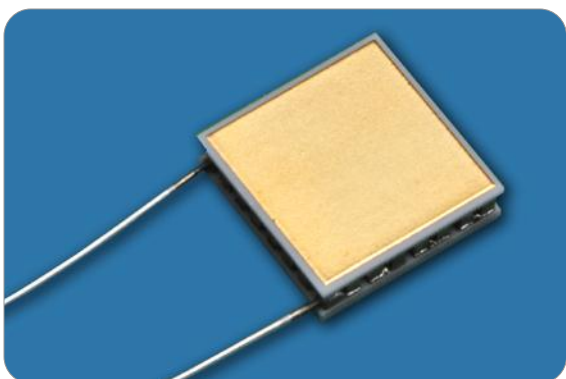




**marlow industries, inc.®**  
Subsidiary of II-VI INCORPORATED

# TECHNICAL DATA SHEET



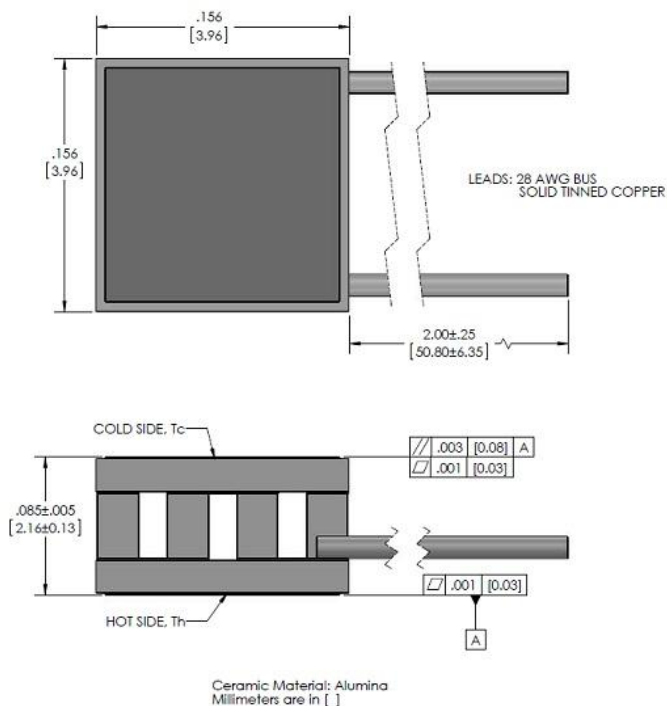
## NL1020T

Single-Stage Thermoelectric Cooler  
RoHS and REACH EU Compliant

### TYPICAL PERFORMANCE VALUES

Hot Side Temperature (°C)	27°C	50°C
Δ Tmax (°C-dry N <sub>2</sub> ):	64	72
Qmax (watts):	0.90	1.0
Imax (amps):	1.8	1.8
Vmax (vdc):	0.8	0.9
AC Resistance (ohms):	0.40	--

### MECHANICAL CHARACTERISTICS



## **-01AC, -02AC, -03AC**

### ORDERING OPTIONS

Model Number	Description
NL1020T-01AC	Both surfaces are metallized
NL1020T-02AC	Hot side exterior is metallized
NL1020T-03AC	No metallization
NL1020T-04AC	No metallization, Insulated Leads, Perimeter Sealed
NL1020T-05AC	No metallization, Insulated Leads

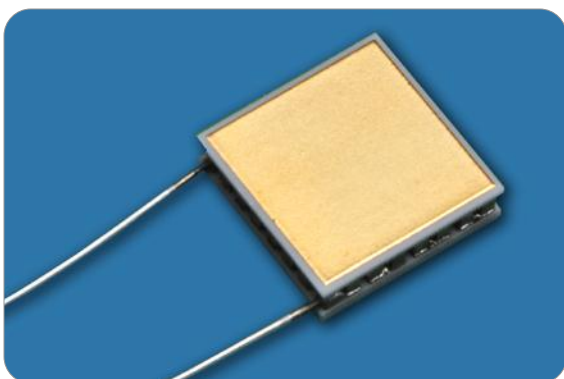
### AVAILABLE MODIFICATIONS

Pretinned metallized ceramic surface(s) with 117°C solder.  
Thermistor mounted on edge of cold side ceramic. (Calibration available.)  
Elevated temperature burn-in with test data provided.



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# TECHNICAL DATA SHEET



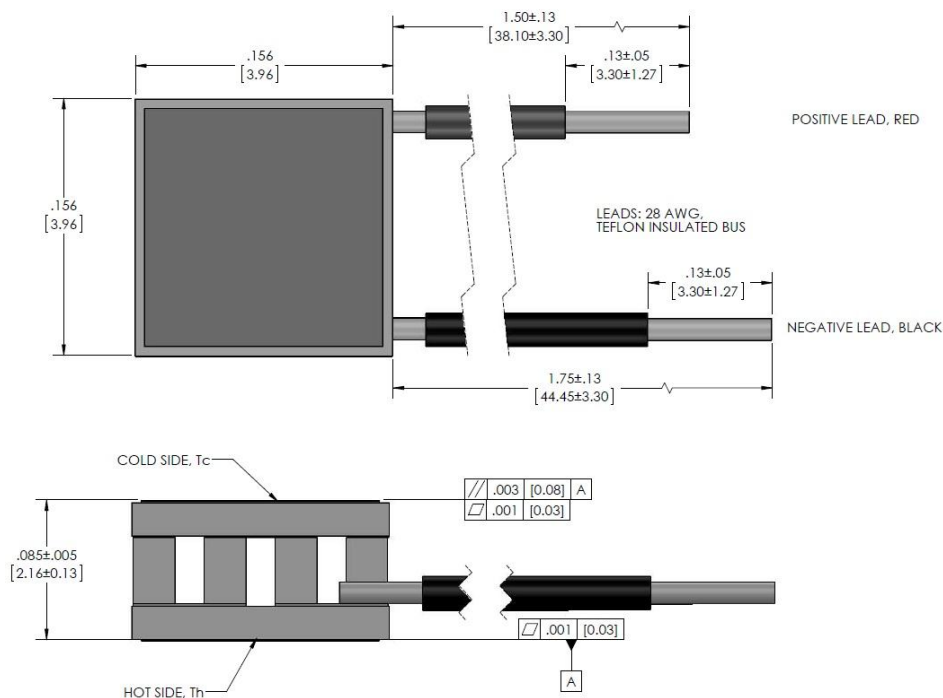
## NL1020T

Single-Stage Thermoelectric Cooler  
RoHS and REACH EU Compliant

### TYPICAL PERFORMANCE VALUES

Hot Side Temperature (°C)	27°C	50°C
Δ Tmax (°C-dry N <sub>2</sub> ):	64	72
Qmax (watts):	0.90	1.0
Imax (amps):	1.8	1.8
Vmax (vdc):	0.8	0.9
AC Resistance (ohms):	0.40	--

### MECHANICAL CHARACTERISTICS



Ceramic Material: Alumina  
Millimeters are in [ ]

## -04AC, -05AC

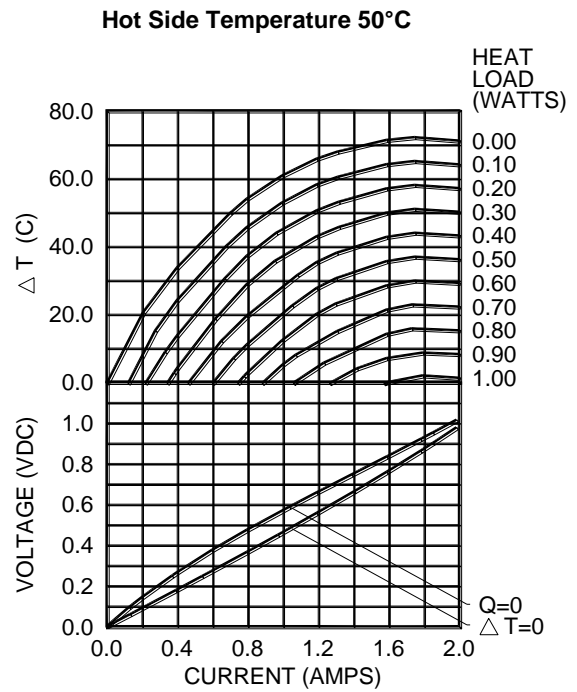
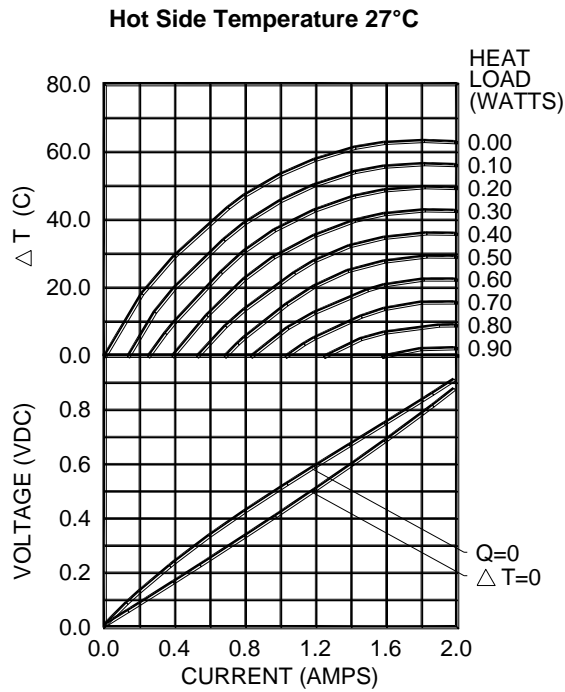
### ORDERING OPTIONS

Model Number	Description
NL1020T-01AC	Both surfaces are metallized
NL1020T-02AC	Hot side exterior is metallized
NL1020T-03AC	No metallization
NL1020T-04AC	No metallization, Insulated Leads, Perimeter Sealed
NL1020T-05AC	No metallization, Insulated Leads

### AVAILABLE MODIFICATIONS

Pretinned metallized ceramic surface(s) with 117°C solder.  
Thermistor mounted on edge of cold side ceramic. (Calibration available.)  
Elevated temperature burn-in with test data provided.

ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN



For performance information in a vacuum or with hot side temperatures other than 27°C or 50°C, consult one of our Applications Engineers.

**Installation**

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

**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.

**CONTACT US:**

For customer support or general questions please contact a local office below or consult our website for distributor information.

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