

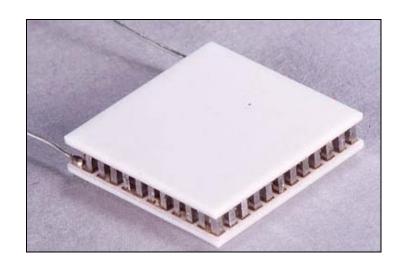
# marlow industries inc.®

## **Thermoelectric Cooler**

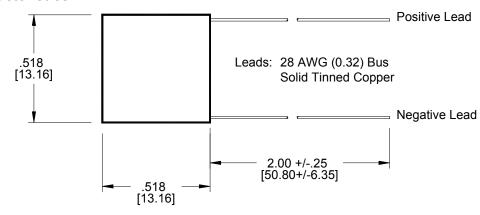
MI1023T

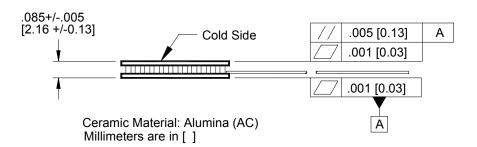
#### **Performance Values**

Hot Side Temperature (°C)	27°C	50°C
Δ Tmax (°C-dry N <sub>2</sub> ):	64	73
Qmax (watts):	9.2	10.5
Imax (amps):	1.8	1.8
Vmax (vdc):	8.0	9.0
AC Resistance (ohms):	3.86	



### **Mechanical Characteristics**





## **Ordering Options**

MI1023T-01	both surfaces are metallized
MI1023T-02	hot side exterior is metallized
MI1023T-03	no metallization

- For example, and MI1023T with only the hot side metallized is specified as an MI1023T-02AC
- 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.

HEAT LOAD (WATTS)

0.00 1.00

2.00

4.00

5.00

6.00

7.00

8.00

9.00 10.00

Q=0

2.0

△ T=0

#### **Performance Curves**

#### **Environment: One atmosphere dry nitrogen**

Hot Side Temperature: 27°C Hot Side Temperature: 50°C **HEAT** LOAD (WATTS) 0.08 80.0 0.00 60.0 60.0 1.00 2.00 ∆T (C) 3.00 40.0 40.0 4.00 5.00 6.00 20.0 20.0 7.00 8.00 9.00 0.0 0.0 8.0 8.0 VOLTAGE (VDC) VOLTAGE (VDC) 6.0 6.0 4.0 4.0 Q=0 △ T=0 2.0 2.0 0.0 0.0

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

0.0

8.0

**CURRENT (AMPS)** 

1.2

1.6

### 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**

0.0

8.0

**CURRENT (AMPS)** 

1.2

1.6

2.0

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.



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