Thermoelectric Cooler Element, 6.0 A

TEC1.4-6



Description

Thorlabs' 6.0 Amp Single-Stage TEC Element is built with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics. It has solid state reliability and high strength for rugged environments. It has a center hole to for light to travel through, making it an ideal choice for optics applications. Additionally, the center hole provides functionality as a mechanical fastening point or a way to attach a temperature probe.

Performance Values

Hot Side Temperature (°C)	@ 25 °C	@ 50 °C
ΔT_{max}[a]	67 °C	75 °C
Q_{max}	6.0 W	6.6 W
I_{max}[b]	6.0 A	6.0 A
V_{max}[b,c]	1.7 V	1.9 V
Module Resistance	0.27 Ω	0.30 Ω

a. Environment: 1.0 atm Dry N_2
b. Do not exceed I_{max} or V_{max} when operating the module.
c. DC Voltage

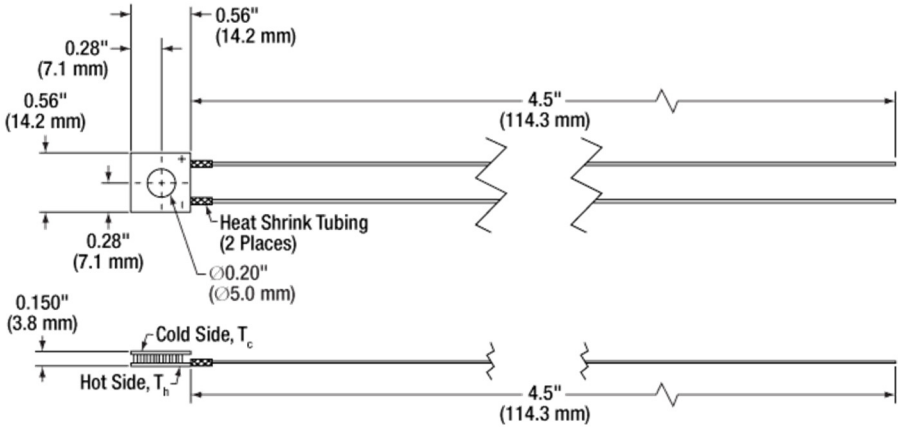
Mechanical Characteristics

Dimensions Per Side[a]	
Length	0.551" (14.0 mm)
Width	0.551" (14.0 mm)
Height	0.150" ± 0.010" (3.81 mm ± 0.254 mm)
Pass Through Hole Diameter	0.2" +0.005"/-0.001" (5.08 mm +0.13 mm/-0.25 mm)
Flatness	0.0015" (0.0381 mm)
Parallelism	0.0015" (0.0381 mm)
Lead Length	4.5" (114.3 mm)

a. Hot and Cold Side Have Same Dimensions

Additional Characteristics	
Ceramic Material	Alumina (AC)
Surface Finish (Both Sides)	Lapped
Sealing Material	None
Leads	4.5" (114.3 mm), 18 AWG PVC
Solder Construction	138 °C, BiSn
Max. Operating Temp.	80 °C

Drawing



Performance Curves

