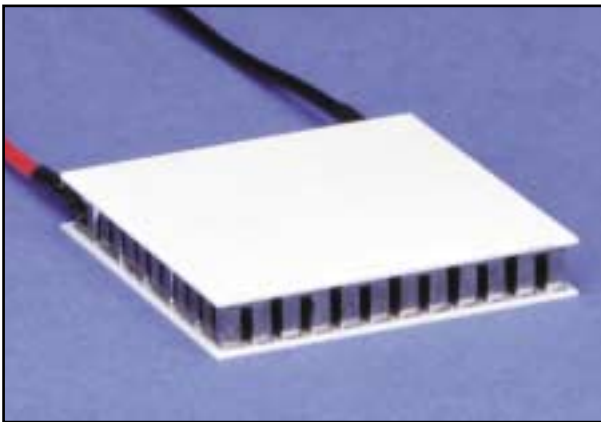




Epoxy Sealing (EP)



Silicone (RTV)



Conformal Coating (EC)

SEALED THERMOELECTRIC COOLERS

When used in conjunction with recommended assembly sealing techniques, these moisture protection options help prevent water or gases from contacting the TE elements and conductors.

Epoxy Sealing (EP) – A low-density (lightweight), syntactic foam epoxy resin for electronic encapsulation and perimeter sealing. When cured the material is completely uni-cellular and therefore the moisture absorption is negligible. The material exhibits a low dielectric constant, low coefficient of thermal expansion and low cure shrinkage. It contains microballoons to reduce thermal conductance. Usable temperature range is -40 to +130°C.

Silicone (RTV) – A perimeter seal that retains elastomeric properties over a wide temperature range. The non-corrosive material exhibits excellent electrical properties and UV, chemical and weather resistance. Usable temperature range is -60 to +204°C.

Conformal Coating (EC) – Conformal coating is a transparent, general purpose dip epoxide surface coating that is used for coating electronic components for corrosion protection and high insulation resistance. Not a perimeter seal. Can be used in conjunction with RTV. Usable temperature range is -55 to +150°C.

TEC Options & Services



Finish Options	CP Series	OptoTEC			ThermaTEC HT	PolarTEC PT	UltraTEC UT	Multistage	Center Hole SH/RH
		OT	ET	HOT					
Metallized Hot and/or Cold face	M/M	HG/CG	HG/CG	HG/CG	–	–	H0/C0▲	M/M	M/M
Non-Metallized Hot and/or Cold face	L/L	H1/C1	H1/C1	H1/C1	√	√	H1/C1	L/L	L/L
Pre-tinning Hot and/or Cold face with 118°C InSn Solder	T/T	H2/C2	H2/C2	H2/C2	–	–	H2/C2▲	T/T	T/T
Pre-tinning Hot and/or Cold face with 138°C BiSn Solder	–	–	H3/C3	H3/C3	–	–	–	–	–
Pre-tinning Hot and/or Cold face with 183°C PbSn Solder	–	–	H4/C4	H4/C4	–	–	–	–	–
Pre-tinning Hot and/or Cold face with 93°C InSnCd Solder	T93/T93	H5/C5	H5/C5	H5/C5	–	–	H5/C5▲	T93/T93	T93/T93

▲ F1 style only.

Examples: CP 1.0-127-05TL = Pre-tinned Hot Face (118°C InSn), Non-Metallized Cold Face
 OT 1.2-18-F2-H2/C5 = Pre-tinned Hot Face (118°C InSn), Pre-tinned Cold Face (93°C InSnCd)

Thickness Tolerance Options	CP Series	OptoTEC	ThermaTEC	PolarTEC	UltraTEC	Multistage	Center Hole Series
+/- 0.001" (0.025mm)	-1	-T1	-T1	-T1	-T1	–	-1
+/- 0.0005" (0.013mm)	-2†	-T2	-T2	-T2	-T2	–	-2†

NOTE: Call MELCOR for thickness options of Multistage.

Examples: CP 1.0-127-05L-2 = thickness is 3.2mm +/- 0.013
 OT 1.2-18-F2-T1 = thickness is 2.7mm +/- 0.025

Moisture Protection Options	CP Series	OptoTEC	ThermaTEC	PolarTEC	UltraTEC	Multistage	Center Hole Series
RTV perimeter seal, Color: Translucent	-RTV	-RTV	-RTV	-RTV	-RTV	-RTV†	-RTV†
Epoxy perimeter seal, Color: Black	-EP	-EP	-EP	-EP	-EP	-EP†	-EP†
Conformal coating, two applications, Color: Clear	-EC	-EC	-EC	-EC	-EC	-EC	-EC

Examples: CP 1.0-127-05L-RTV = RTV silicone perimeter seal
 OT 1.2-18-F2-EC = Conformal epoxide coating of internal circuit

Wire Options	CP Series	OptoTEC	ThermaTEC	PolarTEC	UltraTEC	Multistage	Center Hole Series	Custom wire-bondable posts
Custom lead length # in inches, (S denotes special requirement)	- W# -	- W# -	- W# -	- W# -	- W# -	- W# -	- W# -	√ *
Custom wire colors	√	√	√	√	√	√	√	√ *
Custom wire types (Teflon, Solid, Bare, etc.)	√	√	√	√	√	√	√	√ *

Examples: CP 1.0-127-05L-W8 = Wire length is 8" (203mm)
 OT 1.2-18-F2-W4 = Wire length is 4" (102mm)

† Does not apply to all devices in series, consult MELCOR.

* Usually requires customized ceramic.

**Contact MELCOR
 for your specification
 needs!**

Services

- TEC Burn-in • Custom Module Design • Serialization • Telecom Screening • Custom Testing • Custom Fabrications
- Statistical Information

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