



## UltraTEC™

UltraTEC™ is the ultimate in thermoelectric cooling technology. Using high performance material technology, it offers the highest performance and efficiencies.

- High performance and power using the latest thermoelectric material technology
- Increased temperature differences ( $\Delta T$ ) or increased heat pumping density
- Increased efficiency
- Most popular sizes and capacities
- Solid-state reliability
- MELCOR Quality

### Interfacing and Options:

F2 (porch) style available in non-metallized finish only.

F1 style options listed on page 24.

### Definitions:

$I_{max}$  Input current resulting in greatest  $\Delta T$  ( $\Delta T_{max}$ ) [amps]

N Number of thermocouples (p- and n-type pairs)

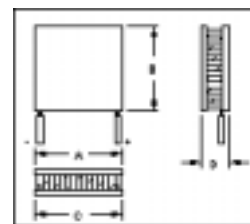
$Q_{max}$  Maximum amount of heat that can be absorbed at cold face (occurs at  $I = I_{max}$ ,  $\Delta T = 0^\circ$ ) [watts]

$T_h$  Temperature of the TEC hot face during operation [ $^\circ C$ ]

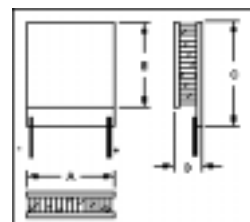
$\Delta T_{max}$  Maximum temperature difference a TEC can achieve (occurs at  $I = I_{max}$ ,  $Q_c = 0$ ) [ $^\circ C$ ]

$V_{max}$  Voltage at  $\Delta T_{max}$

F1 (no porch)



F2 (porch)



## UltraTEC Series Specifications

Catalog Number	$T_h = 50^\circ C$				$T_h = 25^\circ C$				N	Dimensions (mm)				Wire Gauge (AWG)
	$I_{max}$ (Amps)	$Q_{max}^{(1)}$ (Watts)	$V_{max}$ (Volts)	$\Delta T_{max}$ ( $^\circ C$ )	$I_{max}$ (Amps)	$Q_{max}$ (Watts)	$V_{max}$ (Volts)	$\Delta T_{max}$ ( $^\circ C$ )		A	B	C	D <sup>2</sup>	
UT4-12-30-F1	3.8	37	16.1	78	3.9	33	14.4	68	127	30	30	30	3.2	24
UT4-12-30-F2	3.8	37	16.1	78	3.9	33	14.4	68	127	30	30	34	3.2	24
UT4-7-30-F1	3.7	21	9.0	79	3.8	18	8.1	70	71	30	30	30	4.7	18
UT4-12-40-F1	3.7	37	16.1	79	3.8	33	14.4	70	127	40	40	40	4.7	18
UT6-7-30-F1	5.7	32	9.0	79	6.0	29	8.1	70	71	30	30	30	3.8	18
UT6-12-40-F1	5.7	56	16.1	79	6.0	52	14.4	70	127	40	40	40	3.8	18
UT6-12-40-F2	5.7	56	16.1	79	6.0	52	14.4	70	127	40	40	44	3.8	18
UT8-12-25-F2	7.9	75	16.2	79	7.9	69	14.4	69	127	25	24	27	1.9	24
UT8-12-30-F2	7.9	75	16.2	79	7.9	69	14.4	69	127	30	30	34	2.6	20
UT8-12-40-F1	8.0	78	16.1	77	8.5	72	14.4	67	127	40	40	40	3.3	18
UT11-12-30-F2	10.9	105	16.2	79	11.0	95	14.4	69	127	30	30	34	2.4	22
UT15-7-30-F2	14.5	77	9.1	79	14.6	70	8.0	69	71	30	30	34	2.8	20
UT15-12-40-F2	14.5	138	16.2	79	14.6	126	14.4	69	127	40	40	44	2.8	20

For all UT Series modules, wire is 152mm (6.0 in.) long.

### Notes:

- 1)  $Q_{max}$  rated value at  $\Delta T = 0^\circ$ ,  $I_{max}$  and  $V_{max}$ ,  $T_h$  at indicated value.
- 2) Thickness for non-metallized versions only.

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