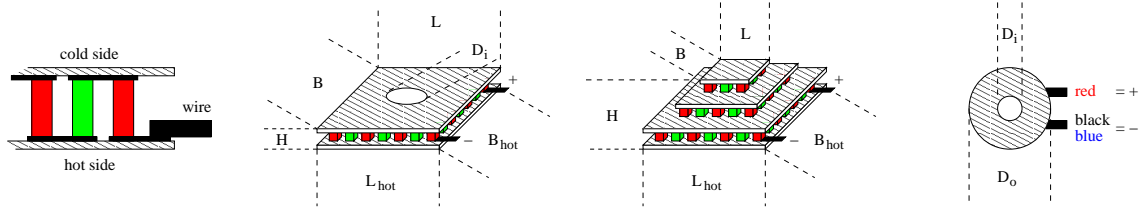


TEC1S-48-48-191/78

industrial standard peltier element



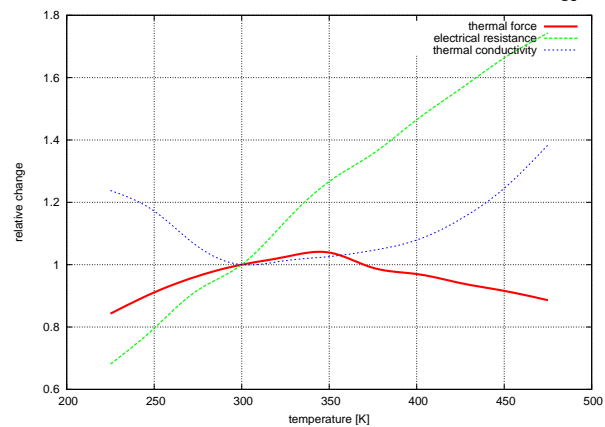
thermal and electrical data:

thermal force:

resistance:

thermal conductivity:

α_{300K}	0.0524	$\frac{V}{K}$
ρ_{300K}	0.750	Ω
γ_{300K}	1.42	$\frac{W}{K}$



available maximum operating temperatures: T_{max} 80, 120, 150(non-ROHS!), 200 °C
 typical tolerances: $\pm 5\%$

mechanical data:

size of cold side:

$$L \times B \times H \quad 48.0 \times 48.0 \times 3.60 \text{ mm}$$

size of hot side:

$$L_{hot} \times B_{hot} \quad 48.0 \times 48.0 \text{ mm}$$

height tolerance:

$$\Delta H \quad \pm 0.25 \text{ mm}$$

length and width tolerances:

$$\Delta L \text{ and } \Delta B \quad +0.5 / -0.2 \text{ mm}$$

weight:

$$m \quad 39 \text{ g}$$

ceramic plates:

BK-100 (grey), BK-96 (white) or AlN (opaque)

location of production:

Russia

experimental data:

typical values at:

		$T_h = 50^\circ C:$	$T_h = 300 K:$
maximum cooling power:	Q_{max}	191.4 W	164.9 W
	at $\Delta T = 0$ and $I_{Q_{max}}$	22.6 A	21.0 A
maximum temperature difference:	ΔT_{max}	77.8 K	69.0 K
	at $Q = 0$ and $I_{\Delta T_{max}}$	17.1 A	16.1 A
	U_{max}	16.9 V	15.7 V

order information:

TEC1S-48-48-191/78-B: max. 80°C
 TEC1S-48-48-191/78-C: max. 120°C
 TEC1S-48-48-191/78-D: max. 150°C
 TEC1S-48-48-191/78-G: max. 200°C

TEC1S-48-48-191/78-BS: sealed, max. 80°C
 TEC1S-48-48-191/78-CS: sealed, max. 120°C
 TEC1S-48-48-191/78-DS: sealed, max. 150°C
 TEC1S-48-48-191/78-GS: sealed, max. 200°C