

M 540 S, Platinum Temperature Heater

Temperature range -25 °C to $+800\text{ °C}$, short-term to $+850\text{ °C}$

The Heraeus M540 is a platinum thin film heater which combines excellent long-term stability with a wide temperature application range from -25 °C up to $+800\text{ °C}$. This feature makes it best suited to heat liquids, gases and solids with high precision, short reaction time and full control.

Nominal Resistance R_0	Tolerance	Order Number	Packaging
12 Ohm at 0 °C	$\pm 0.5\text{ Ohm at }0\text{ °C}$	50 840 80	Plastic bag

Temperature and tolerance range

Characteristic based on DIN EN 60751

-25 °C to $+800\text{ °C}$ (temporary use to $+850\text{ °C}$ possible)

Temperature coefficient

TCR = 3850 ppm/K (nominal value)

Design

Pt-thin film on Al_2O_3 – Ceramic substrate covered with glass ceramic layer and connection wires

Long-term stability

Max. R_0 -Drift $\pm 0.5\text{ Ohm}$ after each:

- 1,000 hours at 700 °C , 3 W
- 10,000 cycles 40 s on/off (room temperature to 700 °C)

Heating current

Max. 1000 mA

Heating voltage

Max. 24 V (consider temperature-dependent resistance)

Maximum temperature

800 °C

Peak load

1 hour at 850 °C

Heating time

$\geq 12\text{ sec.}$ from 25 °C to 700 °C

Test conditions:

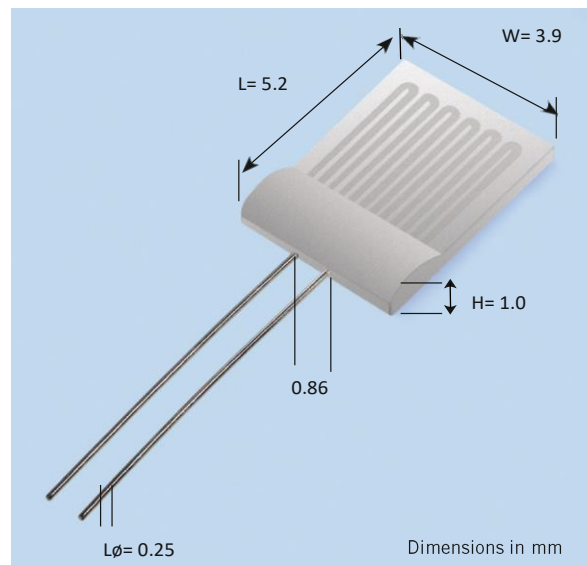
Not installed in still air at room temperature

Leads

Pt-wire, $\varnothing 0.25\text{ mm}$, 6 mm

Connection technology

Suitable for welding and brazing



Packaging

Alternative packaging forms on request.

Environmental capability

Comply RoHS and REACH

Note

Other tolerances, values of resistance and wire lengths are available on request.



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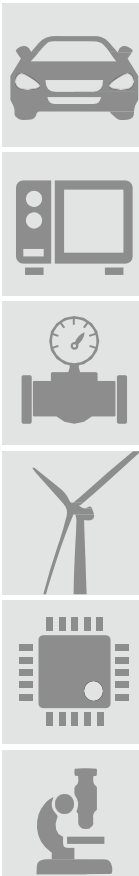
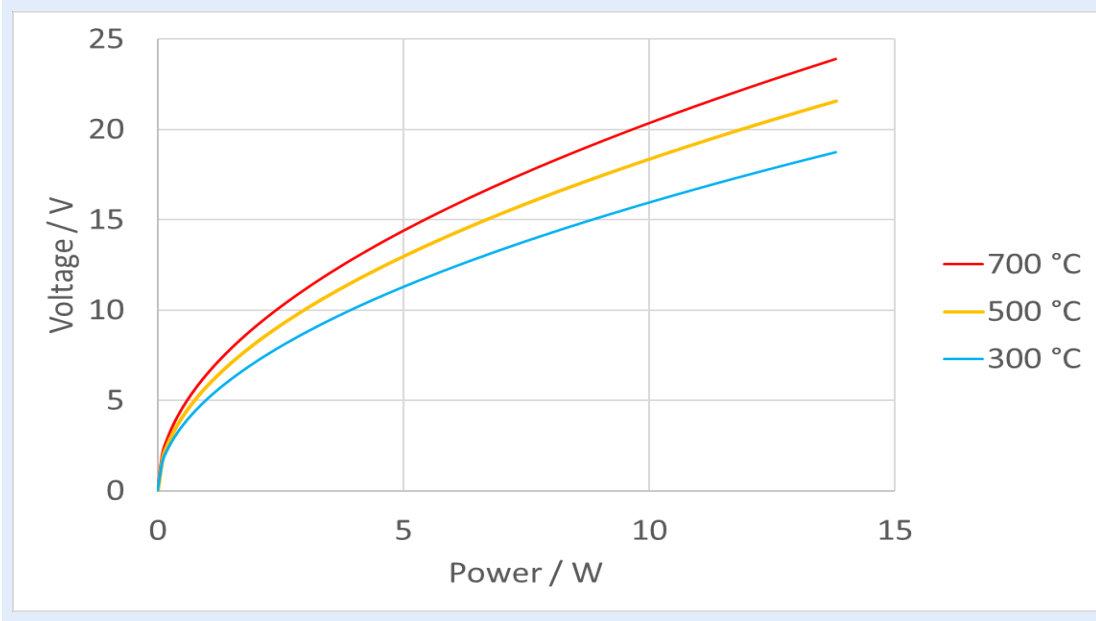
Heraeus Nexensos GmbH, Reinhard-Heraeus-Ring 23, 63801 Kleinostheim, Germany

Web: www.heraeus-nexensos.com

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Dependence of the operating voltage on the power dissipation at different temperatures (typical values)



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