Technical data sheet for Conflux rectangular thin film heater 12 x 35 mm

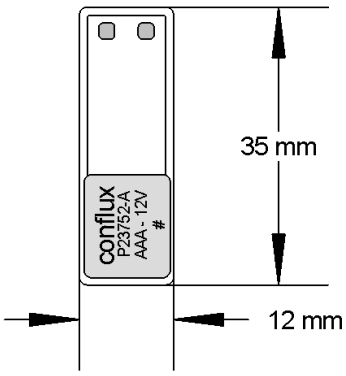
Article number: P23752-A

Product Description

The Conflux thin-film PTC heater P23752 is based on our industry-unique technology using thin foils of electrically conductive PTC rubber which means that it will not overheat and require no regulating electronics. The result is an energy efficient and reliable heating solution with a product life expectancy and time to install superior of any alternative solution. Conflux conductive PTC Heaters are ideal for preventing ice formation and keeping objects warm.

Heater external dimensions

The element border is 1mm. The heater thickness is 0,35mm. The contact areas are pre-soldered. The heater comes with an adhesive on the backside of the heater for easy installation onto object to be heated.



Technical Specifications

Outer dimensions (including the encapsulation material):
12mm x 35mm x 0,35mm

Nominal voltage:
12V (28V maximum)

Ambient temperatures that the heater can operate in:
-40°C to +80°C

Electrical insulation:
One layer of PET on each side

Minimum bending radius:
50 mm

RoHS compliant:
Yes

Electrical connection

Cables to be soldered on two connection pads with positions given in the drawing. Use heat sink under the contact pads when soldering to avoid melting encapsulation material.

Heater specifications

Active width [mm]	Active length [mm]	Thickness [mm]	Nominal voltage [V]	Max Temp[1] [°C]	Power[2] at -20°C [W]	Power[2] at +20°C [W]	Inrush current[3] [A]
10	30	0,35	12	65	7	2	0,25

1) Free-in-air, at room temperature (+25 °C), when powered with nominal voltage of 12V

2) Equilibrium power when attached to a large heat sink at constant ambient temperature (-20°C and +20°C)

3) Average inrush current during 0.4s, at V_{nom}, minimal cooling and an ambient temperature of +25°C..

Unique Benefits

Energy efficient heating

Due to its very low equilibrium working temperature, self-regulating properties, and flexible geometry possibilities, the Conflux heaters are up to 50% more energy efficient than other conventional solutions.

High & low power capabilities

The Conflux foil can be designed to produce heat over a wide power range. The heater can therefore be small but still produce large amounts of heat. The high power per unit area ensures a rapid warming of the application or object. The Conflux foil can also be designed with a high resistivity to provide heating elements with low power at high voltages.

Simplifies your design process

The Conflux heater can be designed over a wide parameter space. Hence, you can focus on your design and geometrical constraints, still finding a heater with optimal thermal properties. The Conflux foil is thin and flexible and fits in most applications without requiring additional space.

Perfect Safety

A Conflux heater cannot overheat, not even in the case it detaches from the object it heats. Thanks to the materials self-regulating properties it cannot heat any point of the heater beyond the chosen safety temperature. No thermostat or other overheat protection is needed.

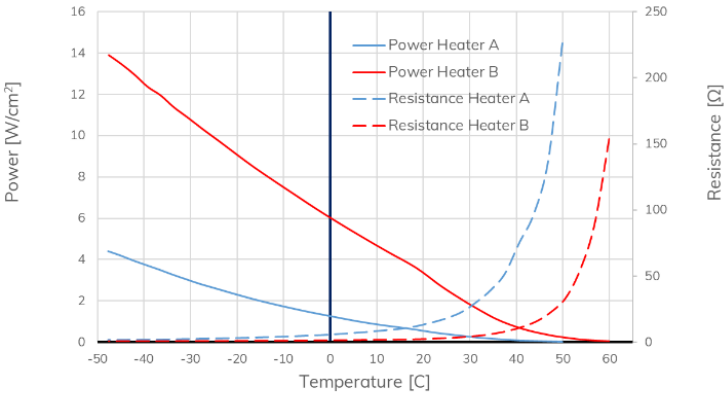
Stable to voltage variations

A Conflux heater is stable to voltage variations. Thanks to the material's strong PTC characteristics, the heater strives to maintain the heated object at a constant temperature over a wide voltage range outside its nominal voltage.

Strong PTC characteristics

The Conflux Positive Temperature Coefficient (PTC) rubber material has strong PTC characteristics. This enables the design of a self-regulating heater with unprecedented heating power that still never gets warmer than the designated temperature.

Effect curves as a function of ambient temperature for two different thin film heaters



Contact us and design your optimal heating solution today.

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