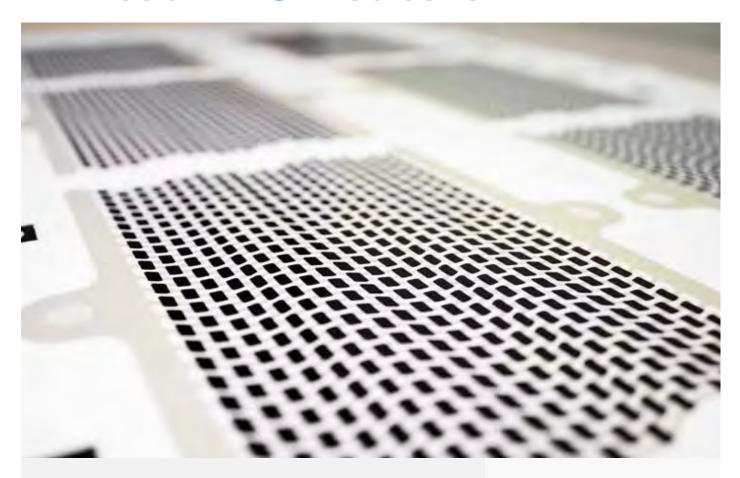


## **Printed PTC Heaters**



Cipem has developed printed heaters using Positive Temperature Coefficient (PTC) ink. The heaters are lightweight, thin and produce heat rapidly in a uniform fashion while remaining inherently safe. They are designed to generate heat up to a specified temperature to be chosen upon development of the necessary application, limited to specific temperatures.

Applications include a variety of possibilities, where uniform heating and a simple low cost solution is required. Installation is easy and the heating elements can be applied to a wide range of surfaces.

#### **Applications**

- · Heated seats & beds (medical & aero)
- · Heated floors & walls
- · Battery heaters
- · Anti-condensation units
- · Food warming
- · Blood & IV bag heating
- · Medical accessory heating
- · Wing heating & de-icing
- Etc

#### **Electrical Specifications**

Set Temperature (standalone)	45°C to 85°C (at 25°C ambient temperature)
Power Density	Up to 3000W/m²
Dielectric Strength	$60G\Omega$ at $500VDC$ typ
Electrical Interface	<ul><li>-Wire leads</li><li>-2.54mm pitch connector (with or without latch)</li><li>-ZIF termination</li><li>-Other configurations available upon request</li></ul>
Input Voltage	5V to 300V (AC or DC)
Drive Current	-Max 3A (start-up less than 1 min) -Max 1A (steady state)

### **Mechanical Specifications**

Thickness	0.5mm typical
Flexibility (min. bend radius)	1cm
Weight	0.6kg/m² (at thickness = 0.5mm)

#### **Environmental & Certifications**

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 85°C
Humidity	95% RH @ 40°C
Certifications	RTCA/DO-160, ASTM Section 10, certifiable to CSA





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For more information, get in touch with one of our experts at IHM or CIPEM.

We're here to support and nurture your project.

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