

# PEN HEATERS

## Description

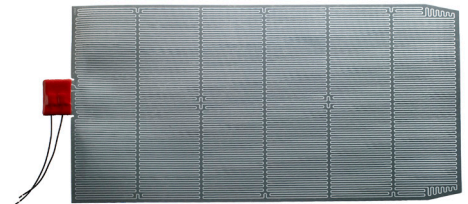
PEN is a heater similar to PET but with much better properties. PEN is a little more expensive than PET, but have higher chemical, thermal, mechanical and electrical properties. The material is common used in electronic devices.

## Technical specification

Max element temp.	160°C (320 °F)
Min. element temp.	-60 °C (-76 °F)
Dielectric strength at 20°C AS per ASTM KV/mm	160
Thermal conductivity at 100 °C W/(m·K)	0.16
Moisture absorption as per ASTM D-570-63. (24h immersion at 23°C)	0.8 %
Waterproof as per IEC 335-1 sect. 15-16	yes
Constant of dielectricity at 25°C, 50Hz	3.2
Bending radius, min	1 mm
Max. element width	610 mm
Power density	1 W/cm <sup>2</sup> (depending on application)
Resistance tolerance	As standard, ±5% of nominal. Tolerance down to ±2% available
Rated voltage	Up to 1000 V AC/DC single or 3 phase



Product photo



## Benefits & Fields of Application

### BENEFITS

- Possible to waveflow solder with leadfree solder
- Higher temp possible compared to PET
- Good chemical resistance
- Higher mechanical strength with 3 approx 30% compared to PET

### FIELDS OF APPLICATION

- Bathroom mirror heaters
- Radiators
- DNA Analysis
- High power standard elements (more cost effective compared to polyimide elements)



Application photo