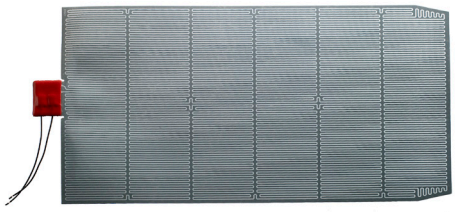
# PEN HEATERS

## 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.

Product photo



## 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/cm² (depending on application) |
| Resistance tolerance | As standard, ±10% of nominal.Tolerance down to ±2% available |
| Rated voltage | Up to 1000 V AC/DC single or 3 phase |

## 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