

LCD heater — Data sheet



Standard sizes 3.5" 7"

Easy to assemble - comes with adhesive

Voltage up to 12V

When using a Liquid Crystal Display it is very important to identify the range of its environmental temperature. The operating temperature of a standard display is above -10°C and many displays need even warmer conditions. To ensure the function of the display in cold surroundings it needs external heating.

Typical and critical applications are all types of outdoor mobile systems powered by batteries. In these applications the ZPZ foil will optimize the power consumption and save energy compared to traditional heaters.

Conflux ZPZ foil is a thin, self-regulating, PTC heating element based on the intelligent SIP compound and ZPZ design. It is a three-layered structure consisting of two sheets of copper separated by a conductive polymeric compound (SIP). The combination of SIP compound and ZPZ design saves power for when and where you need it.

The main advantages compared to traditional heating elements are:

Pointwise self-regulation

- High power for optimal performance at low temperatures
- Low power and moderate heating for energy saving in warmer environments
- Pointwise temperature limiting
- No regulatory circuitry needed

Rapid warm-up

- High initial heating power gives a rapid warm-up.

100% surface coverage

- Smoother temperature distribution
- Low power density

Functionality independent of form

- The surface temperature and power density are independent of area.
- High design flexibility

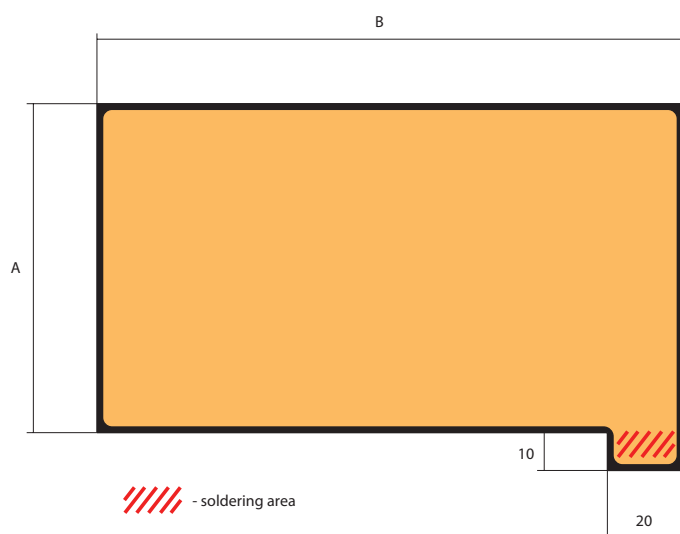
RoHS compliant

Specifications are subject to change without notice. No liability or warranty implied by this information. Environmental compliance based on producer documentation.

CONflux
intelligent heating

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Technical Specifications

Voltage: up to 12 V AC/DC
 Connection: Prepared for soldering
 Power tolerance: $\pm 15\%$

Encapsulation: PET/PE
 Adhesive: 3M 300LSE
 Bulk thickness: 0.28 mm (excluding adhesive)

Maximum applied pressure: 2 kg/cm²

Overall heat transfer coefficient: 11 W/m² K
 Operational, ambient temperature: -40 to +100°C
 Storage temperature: -60 to +60°C

RoHS compliant

Designed for flat surfaces. Do not bend or fold.

Article no.	A [mm]	B [mm]	d_{tot} [mm]	V_{max} [V]	P_{-20} [W]	P_{+22} [W]	P_i [W]
HF-30-1015	87	155	0.28	12	10	3.5	10
HF-30-1016	53	71	0.28	12	4	1.5	4

HF-30-1015 7" (16:9)

HF-30-1016 3.5" (4:3)

V_{max} Maximum voltage

d_{tot} Bulk thickness of ZPZ foil and encapsulation (excluding adhesive)

P_{-20} Equilibrium power at V_{max} (DC), minimal cooling and an ambient temperature of -20°C. Tolerance: $\pm 15\%$.

P_{+22} Equilibrium power at V_{max} (DC), minimal cooling and an ambient temperature of +22°C. Tolerance: $\pm 15\%$.

P_i Initial power at V_{max} (DC), minimal cooling and an ambient temperature of +22°C. Tolerance $\pm 20\%$

The ZPZ foil can be manufactured to meet other technical specifications

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