

## LM Silicone Rubber Mat Heaters

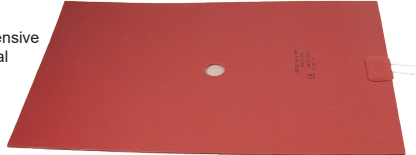
Silicone rubber is ideally suited for the production of heater mats. With its low thermal mass and superb electrical insulation properties it allows high power densities with fast response to temperature control. With silicone's wide temperature range tolerance of -60°C to 230°C, being thin and lightweight it has a distinct advantage over other forms of heating elements. Where direct, precise and intimate heating is required silicone heaters are the ideal solution.

The stock/standard sensors are of an etched foil construction, with the foil tracks being laminated between two thin layers of silicone to give precise even heating and rapid heat up properties. All stocked mats are supplied with 500mm of PTFE flying leads and adhesive backing (rated +180°C continuous). The mats are semi-flexible.

Where increased flexibility or a bespoke design is required a wire-wound mat offers a good solution. Using evenly spaced resistance wire, laminated between sheets of silicone, they are ideal for prototyping or problem-solving applications.

When manufactured to customer specifications they can be made in an extensive range of shapes and sizes: max width 940mm, max length 3000mm, nominal thickness (with adhesive) 0.8mm...3.0mm.

- Etch Foil technology for stock/standard heaters (semi-flexible)
- Wire wound technology for small/bespoke requirements (can be flexible)
- Two ply woven glass textile reinforced silicone rubber construction
- Precise, even heating, moisture and chemical resistant
- Steam resistant up to 130°C or 2.5 bar
- Wide operating range: -60°C to +180°C (with adhesive), -60°C to +200°C (without adhesive)
- Range of power ratings available: 240V (AC or DC), 110V, 24V, 12V (AC or DC), 3-Phase (400/440V)



All stock 240V heaters include a 17mm diameter centre hole

size (mm)	wattage (W)	voltage (V)	order code
25 x 50	1.24	12	LM25x50-1.24-12
50 x 50	2.5	12	LM50x50-2.5-12
50 x 75	3.75	12	LM50x75-3.75-12
50 x 100	5	12	LM50x100-5-12
50 x 150	7.5	12	LM50x150-7.5-12
75 x 100	7.5	12	LM75x100-7.5-12
75 x 200	15	12	LM75x200-15-12
100 x 100	10	12	LM100x100-10-12
100 x 150	15	12	LM100x150-15-12
150 x 200	30	12	LM150x200-30-12
200 x 300	60	12	LM200x300-60-12
200 x 400	80	12	LM200x400-80-12
50 Ø	2	12	LM50-2-12
75 Ø	4	12	LM75-4-12
100 Ø	8	12	LM100-8-12

size (mm)	wattage (W)	voltage (V)	order code
100 x 150	50	240	LM100x150-50-240
100 x 150	100	240	LM100x150-100-240
150 x 200	100	240	LM150x200-100-240
150 x 200	200	240	LM150x200-200-240
200 x 300	200	240	LM200x300-200-240
200 x 300	400	240	LM200x300-400-240
200 x 400	267	240	LM200x400-267-240
200 x 400	533	240	LM200x400-533-240

**Please note:** for high temperature applications alternative materials can be supplied. Contact sales for further information or to discuss your requirements for custom designs.

Need a thermocouple?  
Contact sales for further information.



## LBN Band/Nozzle Heaters

These stainless steel heaters are designed to clamp around barrels, metal pipes or tubular chambers to inject heat from the outside. The heaters are Mica insulated, 80/20 nickel/chrome elements, clamped and protected by a formed steel plate. The element resistors are carefully spaced to provide even heat. The split ring design allows the heater to be slipped over the barrel/tube and fastened into place by roll bolt clamps.

The standard design incorporates fibreglass insulated connection cable.

The bands can be designed to incorporate cut-outs, various lengths, diameters and termination options.

- Designed to clamp around barrels, metal pipes and tubular chambers
- Coated mild/stainless steel band body, Mica insulated elements
- Supplied as standard with fibreglass insulated cable
- Custom designs available



Note: Other diameters, widths and wattages are available.

to suit pipe OD (mm)		width (mm)	wattage (W)	voltage (V)	watts density (W/cm <sup>2</sup> )	order code
25	25	120	240	6.1	LBN25-25-120-240	
35	45	225	240	4.5	LBN35-45-225-240	
38	38	175	240	3.9	LBN38-38-175-240	
40	50	280	240	4.5	LBN40-50-280-240	
50	50	300	240	3.8	LBN50-50-300-240	

Technical Details	
Heater Band Body	Coated Mild/Stainless Steel
Element / Element Insulation	80/20 Nickel Chrome / 3 x Phlogopite Mica wound plates
Cable	Glass fibre insulated x 610mm (24") long
Supply Voltage	240V AC Nominal (other voltages available)
Max. Operation Temperature	Approximately +250°C
Wattage	Nominal Wattage varies with voltage. $W2=W1 (E2/E1)^2$ (W1 = rated wattage, W2 = actual wattage, E1 = rated voltage, E2 = supply voltage)
Manufacturing Tolerances	Inside Diameter: ±0.635mm, Width: ±0.635mm, Resistance: ±7%