

Silicone Rubber Thermofoil Heaters

Rugged and flexible to 235°C

Overview

Silicone rubber is a rugged, flexible elastomer material with excellent temperature properties. It is most suited to larger heaters and industrial applications.

- Rugged construction provides high reliability in a wide range of heating applications
- Optional custom profiled heat density creates a uniform heat sink temperature which can improve processing yields
- Factory vulcanization and high temperature capability allows higher wattage levels for faster processing
- High temperature capability to 235°C (455°F)
- UL and TÜV component recognition available
- Resistant to many chemicals
- Not suitable for radiation, vacuum, or prolonged exposure to oil
- Most economical in large sizes

Typical applications

- Thermal developing in graphic imaging equipment
- Prevent condensation in instrument cabinets
- Heat outdoor electronics
- Food service equipment
- Medical respirators
- Laminators
- Drums and other vessels
- Airplane engine heaters

Custom options

- Custom shapes and sizes to 22" × 90" (560 × 2285 mm)
- Custom resistance to 200 W/in² (31 W/cm²)
- Mod-tronic can factory vulcanize rubber heaters to metal shapes for best economy and performance
- Heaters can have integral snaps, straps, or Velcro® for removable installation
- Heaters can include thermostats, temperature sensors and cutouts, wiring harnesses, and connectors
- RoHS compliance
- Contact Customer Service for design assistance



Specifications

Temperature range: -45 to 235°C (-50 to 455°F).

With UL component recognition: -45 to 220°C (-50 to 428°F).

Material: Fiberglass reinforced silicone rubber, 0.008" (0.20 mm).

Resistance tolerance: ±10% or ±0.5 Ω, whichever is greater.

Dielectric strength: 1000 VRMS.

Minimum bend radius: 0.125" (3.2 mm).

Leadwire: Red PTFE insulated, stranded.

Current capacity (based on 100°C max. ambient temp.):

AWG 30 - 3.0 A

AWG 24 - 7.5 A

AWG 26 - 5.0 A

AWG 20 - 13.5 A

Maximum heater thickness:

	No adhesive (A):	#12 PSA (B):
Over element	0.020" (0.5 mm)	0.025" (0.6 mm)
Over leads		
AWG 30 (0.057 mm ²)	0.070" (1.8 mm)	0.085" (2.2 mm)
AWG 26 (0.141 mm ²)	0.080" (2.0 mm)	0.095" (2.4 mm)
AWG 24 (0.227 mm ²)	0.090" (2.3 mm)	0.105" (2.7 mm)
AWG 20 (0.563 mm ²)	0.120" (3.0 mm)	0.135" (3.4 mm)

Add 0.005" (0.1 mm) to above dimensions for foil backing.

Dimensional tolerance:

6" (150 mm) or less	±0.03" (±0.8 mm)
6.01 to 12" (150 to 300 mm)	±0.06" (±1.5 mm)
Over 12" (300 mm)	±0.12" (±3.0 mm)

Tighter tolerances are available on custom designs if needed.

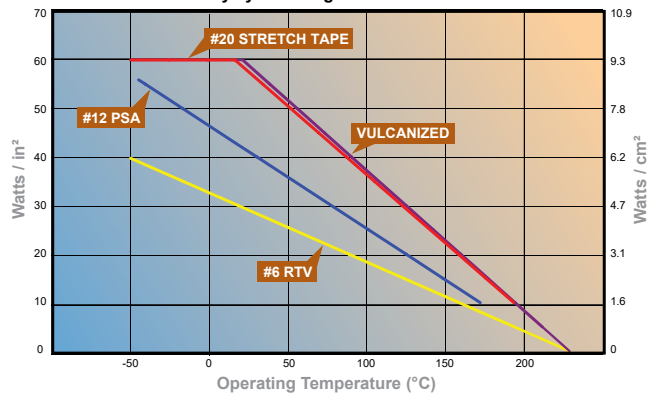
Stock Silicone Rubber Thermofoil Heaters

Notes for Stock Heaters

- Heated area is within the X and Y dimensions
- Voltage and wattage values are for reference only
- Resistance tolerance is +/- 10% or +/- 0.5Ω, whichever is greater
- Heaters may be operated at other voltages if they do not exceed the maximum allowable watt density ratings
- Leadwire length is 12" (305 mm) minimum
- Type 30 configurations have lead connections on an external tab, which produces negligible heat, in most cases, does not need to be adhered to the heat sink
- Use of Acrylic PSA caps the heaters at 150°C max operating temp
- Mounting: Acrylic PSA with foil backing is applied on entire substrate area (including external tab if applicable)
- Temperature range -32°C to 150°C



Silicone Rubber Thermofoil Heaters .008"/0.2mm
Maximum Watt Density by Mounting Method Silicone Rubber



Stock silicone rubber Thermofoil heaters

Sized (inches)		Size (mm)		Type	Resistance (Ω)	Typical power		Effective area		Lead AWG	Model number
X	Y	X	Y			Watts	Volts	in²	cm²		
2.00	2.00	50.8	50.8	1	22.8	34	28	3.43	2.22	24	HR6925
2.00	2.00	50.8	50.8	30	27.4	29	28	2.87	1.85	24	HR6939
2.00	3.00	50.8	76.2	1	14.8	53	28	5.31	3.43	24	HR6926
2.00	6.00	50.8	152.4	1	127.9	103	115	10.34	6.67	24	HR6927
2.00	8.00	50.8	203.2	1	94.9	139	115	13.94	8.99	24	HR6928
2.00	10.00	50.8	254.0	1	75.4	175	115	17.54	11.32	24	HR6929
3.00	3.00	76.2	76.2	1	161.4	82	115	8.19	5.29	24	HR6930
3.00	3.00	76.2	76.2	30	11.8	67	28	6.65	4.29	24	HR6940
3.00	4.00	76.2	101.6	1	119.4	111	115	11.07	7.14	24	HR6931
3.00	5.00	76.2	127.0	1	99.1	133	115	13.34	8.61	24	HR6932
3.00	6.00	76.2	152.4	1	81.9	161	115	16.14	10.41	24	HR6933
4.00	4.00	101.6	101.6	1	88.4	150	115	14.95	9.65	24	HR6934
4.00	5.00	101.6	127.0	1	72.9	181	115	18.14	11.70	24	HR6935
4.00	6.00	101.6	152.4	1	60.3	219	115	21.94	14.15	24	HR6936
5.00	5.00	127.0	127.0	1	57.7	229	115	22.94	14.80	24	HR6937
5.00	8.00	127.0	203.2	1	35.4	373	115	37.34	24.09	24	HR6938