Improve Heat Transfer,
Speed Warm Ups and
Decrease Wattage
Requirements

Rugged, yet thin, lightweight and flexible—the use of Watlow®
silicone rubber heaters is limited only by the imagination.
Heat can be placed where it is needed to improve heat
transfer, speed warm ups and decrease wattage requirements
in an application process.
Fiberglass-reinforced silicone rubber gives the heater
dimensional stability without sacrificing flexibility. Because
very little material separates the element from the part, heat
transfer is rapid and efficient. The heaters are constructed with
a wire-wound element or an etched-foil element. The thin
construction allows them to fit into applications where space
is limited.

Performance Capabilities
- Operating temperatures up to 500°F (260°C)
- Watt densities up to 80 W/in² (12.5 W/cm²), dependent
  upon application temperature
- Wire-wound element thickness — 0.055 in. (1.4 mm)
- Etched-foil element — 0.022 in. (0.56 mm)
- UR®, cUR®, VDE and CE recognitions are available on
  many designs up to 428°F (220°C)

Features and Benefits
- Designed to the exact shape and size needed
- Conforms to your component and/or equipment
- More than 80 designs available immediately from stock
- Reduces downtime
- Constructed with wire-wound or etched-foil elements
  - Delivers a thin, lightweight heater
  - Provides the desired flexibility for many dynamic
    applications
  - Delivers low mass and easily repeatable distributed
    watt densities
- Moisture- and chemical-resistant silicone rubber material
  - Provides longer heater life
  - Vulcanizing adhesives or fasteners
    - Allows heaters to be easily bonded to the part

Typical Applications
- Freeze protection and condensation prevention for many
types of instrumentation and equipment
- Medical equipment such as blood analyzers and test
  tube heaters
- Computer peripherals such as laser printers
- Curing of plastic laminates
- Photo processing equipment
- Semiconductor processing equipment

Mounting Methods
- Pressure sensitive adhesive
- Silicone contact cement kit
- Field applied adhesives (silicone RTV)
- Mechanical fasteners
- Factory bonding
To increase the heating efficiency of your application, silicone rubber heaters can be thermally insulated with silicone sponge rubber, bonded to one side in the following thicknesses:

1/16, 1/8, 1/4, 3/8 or 1/2 in. (1.6, 3.2, 6, 9.5 or 13 mm).

An aluminized surface can be added to the back of the heater to reduce radiated heat losses. This aluminized surface, called “low loss treatment,” adds very little to the unit thickness and maintains a very clean appearance.

For a better moisture seal, specify UL® silicone insulated lead wires. This lead type is rated for 302°F (150°C)/600V. Any lead length is available. Note: Silicone rubber heaters are not designed to be waterproof. Excess exposure to moisture may facilitate premature heater failure.

Watlow can provide flexible heaters with special holes, cutouts and notches in nearly any position required for your design. The resistance element can be brought to within 1/8 in. (3.2 mm) of all edges. Standard spacing is 1/4 in. (6 mm) from all edges.

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