

R A D I A N T Q U A R T Z H E A T E R

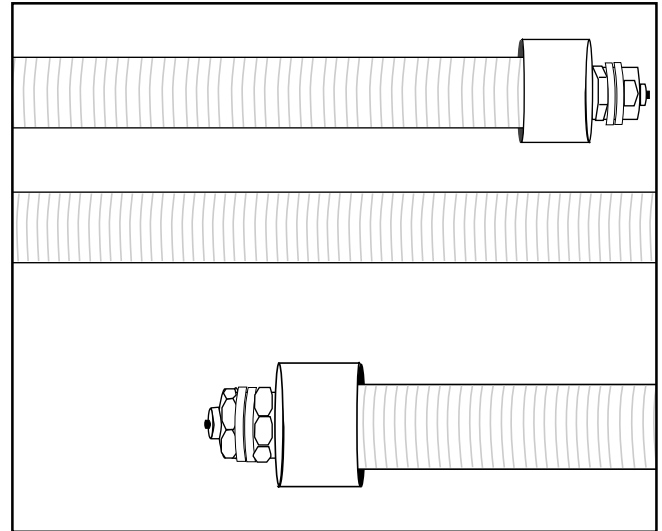
New High Temperature Quartz Heater Provides Efficiency, Economy

The Watlow quartz tube radiant heater provides medium wave infrared energy and fast heat up and cool down. With element temperatures around 1700°F (930°C) the heater produces infrared radiation with a peak energy wavelength of 2.5 microns. Lower operating temperatures produce longer wave lengths. The majority of the energy is transmitted through the translucent quartz tube without being absorbed.

Most designs reach full output in 30 to 60 seconds and typically cool down to 50 percent output in under 15 seconds. The quartz tube heater is ideal for applications where frequent line stoppages are anticipated or quick heat up or cool down is necessary. Heaters can be turned off between production runs to save energy. Unique control schemes are possible that adjust the wattage output of the heaters during the heating cycle.

Applications

- Shrink packaging
- Laminating
- Thermoforming
- Fusing processes
- Vulcanizing and curing rubber
- Sterilizing
- Sealing
- Electrostatic copy equipment
- Drying processes: photos, textiles, coatings and sand core castings



Features and Benefits

Fast delivery

- Less downtime waiting for parts

Termination styles

- Compatible with virtually every enclosure on the market

Ceramic end caps

- Bonded to the quartz tubing ends, the caps provide a rigid support for terminations

Quick heat-up and cool-down

- Higher productivity and better efficiency

High operating temperatures

- Fast thermal processes

Low emission in the visible spectrum

- No objectionable glare is created

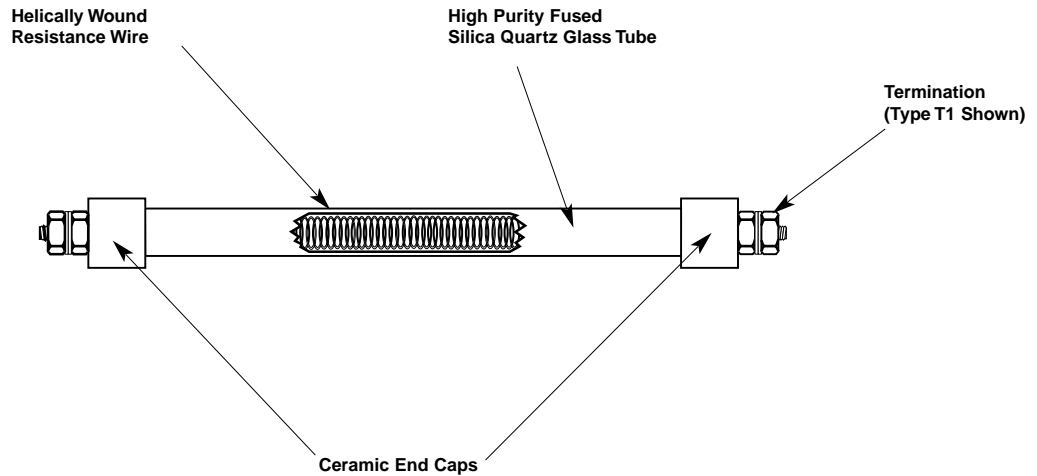
Clean thermal energy source

- No process contamination occurs



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RADIANT QUARTZ HEATER



Specifications

Outside Diameter (nominal/actual):

- 3/8 inch/0.394 inch (10 mm)
- 1/2 inch/0.512 inch (13 mm)
- 5/8 inch/0.630 inch (16 mm)

Ceramic End Caps:

- 3/8 inch tube: 1/16 inch diameter x 1/2 inch long (16 x 13 mm)
- 1/2 inch tube: 3/4 inch diameter x 1/2 inch long (19 x 13 mm)
- 5/8 inch tube: 15/16 inch diameter x 1/2 inch long (22 x 13 mm)

Available Lengths:

- 8 inches to 72 inches (200 mm to 1829 mm)
- 3/8 inch diameter, 60 inch maximum length

Length Tolerances:

- Sheath: $\pm 1/8$ inch (3.2 mm)
- Heated Length: $\pm 1/4$ inch (6.3 mm)
- No-Heat Length: 1 inch (25 mm) minimum

Screw terminal:

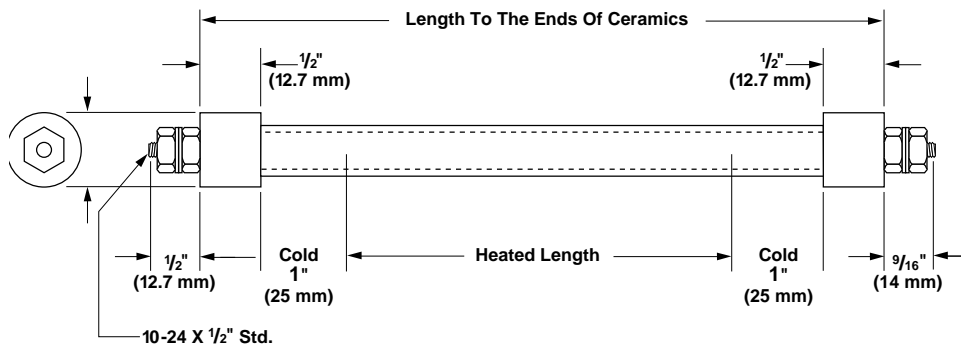
10-24 thread

Termination:

Type T1, T2, T3, T4, T5, T6

Electrical:

- Resistance tolerance: NEMA standard +10 percent, -5 percent
- Wattage tolerance: NEMA standard +5 percent, -10 percent
- Maximum volts: Consult factory
- Maximum amperage: 20A
- Maximum watt density: Consult factory

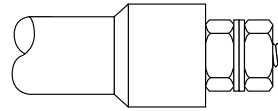


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Standard Terminations

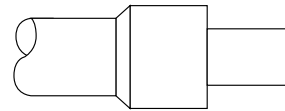
Type T1

Standard termination: 10-24 stainless steel screw thread terminals.



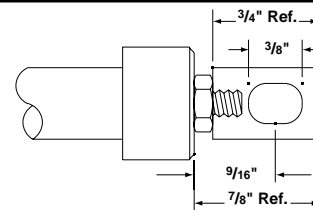
Type T2

Quick disconnect fuse style: $\frac{7}{16}$ inch dia. x $\frac{1}{2}$ inch long (9.5 mm x 12.7 mm).



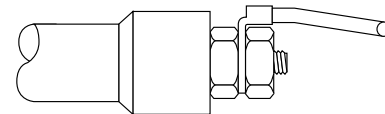
Type T3

Tabs with slotted holes: SS Tabs $\frac{1}{2}$ inch wide x $\frac{3}{4}$ inch long (12.7 mm x 19 mm). Slots $\frac{5}{32}$ inch x $\frac{3}{8}$ inch (7.1 mm x 9.5 mm).



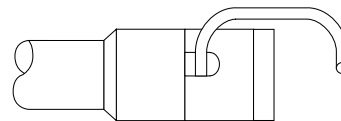
Type T4

Flexible lead termination: 12-inch flexible leads; if longer leads are required, please specify.



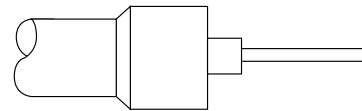
Type T5

Flexible lead termination: 10-24 SS screw thread terminals insulated with ceramic terminal covers. Terminals are pre-wired with 12-inch flexible lead wire. If longer leads are required, please specify.



Type T6

12-inch flexible leads exit the ceramic cap. There are no post terminals. Please specify if longer leads are required.



Applications and Technical Data

- For most efficient heating and longer operating life, quartz heating applications should be rated around 35 to 40 W/in².
- Quartz heaters are designed to be used in a **horizontal position only**.
- When operating at full voltage the translucent quartz tube provides an infrared wave length at an energy peak of 2.5 to 4.0 microns, suitable for most industrial applications.
- White cotton gloves should be worn when handling quartz elements. Never touch the elements with bare hands, as oil and dirt from the skin can contaminate the quartz sheath and cause hot spots and premature heater failure.
- **Hazard of fire:** quartz heaters must not be operated in the presence of flammable vapors, gases or combustible materials without proper ventilation or other provisions to comply with National Fire Protection Code (Bulletin 86A) or other recognized authority.