

TECHNICAL INFORMATION

- 4 Efficient and Instantaneous Heat
- 4 Fast Heat Response and Cooling
- 4 Conservation of Energy
- 4 Functional Design
- 4 High Operating Temperatures

Features

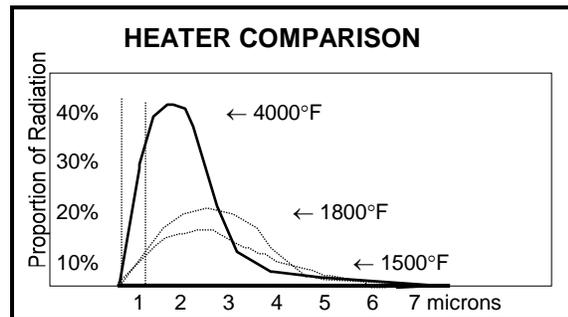
All hot materials radiate energy. Energy is transferred in line of sight by electromagnetic waves, emitted by the source (hot surface) and absorbed by the sink, i.e. the cooler surface. The amount of radiant energy transferred depends on temperature, emissivity and the effective surface area of the source and sink.

Heaters, which utilize radiant energy to transfer heat, are commonly known as *infrared radiant* heaters. Radiant energy is absorbed into the surface layer of material being heated and then dispersed through the material by conduction. Before you dry, heat, bake or cure any product with any heat source check **Akinsun** quartz heater features.

CHARACTERISTIC	METAL SHEATH	QUARTZ TUBE	T3 LAMP
Radiator	Incoloy sheath	Ni/Ch wire	Tungsten filament
Radiator temp	1500°F	1800°F	4000°F
Radiation efficiency	56%	62%	86%
Wavelength band	1.5-7.5um	1.5-6um	0.5-3um
Visible light	Minimal	Minimal	Considerable
Glare	None	None	Substantial
Thermal shock	Excellent	Excellent	Excellent
Physical shock	Excellent	Fair	Poor
Watt/foot	450-750	600	1200
Voltage	120-600	120-600	120-600
Elements dia.	0.315"	.0.315"	
	0.430"	to	0.375"
	0.496"	0.750"	
Response	Slow	Medium to Fast	Fast

Fast Response and Efficient Heat

Standard quartz heaters have a response time of 80% within 15 seconds and 100% within 30 seconds – with almost the same cooling time. These heaters are quiet, cool and emit no significant glare. Infrared heat waves are absorbed by both light and dark color surfaces at the same speed. Special heaters can be designed for response times quicker than 15 seconds.



Distribution of wavelength at different source temps.

TECHNICAL INFORMATION

CLEAN HEAT ENERGY

Akinsun radiant heaters are highly resistant to corrosion, since the heat source is quartz glass. Hardware is made of stainless steel and rust resistant material. An occasional wipe with a cloth keeps it clean.

MOUNTING EASE AND COMPACT

The termination on our quartz heater are built such that it is easy to hang, easy to detach and hang in new ways. They are compact, so you do not need much room to move around, to make new layouts. The units are very light which makes mounting easy.

ECONOMY AND CONSERVATION OF ENERGY

Quartz heaters emit infrared energy, the energy that is most easily absorbed by a mass and converted to heat. The energy goes directly into your product. It does not have to heat a lot of air at first. We use clear (transparent) tubes and also can supply translucent if needed.

Akinsun heaters are up to 80% efficient. Some heat sources return as little as 30% of your input energy in the form of finished work. Because

quartz heaters are so efficient you need fewer units, and less floor space to do a job. All which usually equal the cost of the heater in a year's time.

APPLICATIONS:

- 4 Shrink Packaging
- 4 Screen Printing
- 4 Laminating
- 4 Coating
- 4 Preheating
- 4 Drying
- 4 Sealing
- 4 Thawing
- 4 Food Warming
- 4 Plastic Forming
- 4 Vulcanizing / Curing Rubber
- 4 Sterilization
- 4 Thermoforming
- 4 Electrostatic Copy Equipment
- 4 X-Ray Equipment
- 4 Space Heaters
- 4 Drying Textiles
- 4 Drying Lacquers And Paint

Quartz heater Ordering Information

Order code example: Q200816S13

Q 20 0816 S 13

QUARTZ HEATER _____

QUARTZ DIAMETER 5/8" _____

LENGTH OVER END CAP 8 1/2" _____

TYPE OF HEATER _____

MANUFACTURING CODE* _____

FRACTION	CODE
1/32	01
1/16	02
1/8	04
1/4	08
1/2	16
5/8	20
3/4	24

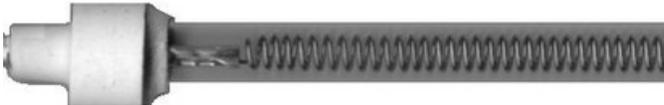
Termination and Style

TYPE	DESCRIPTION
<p>B</p>	<p>Comes with retaining clip for use with UH 300L and spring loaded sockets AT34 thru AT135 Available in 1/2" diameter only. EXAMPLE PART NO. Q162416BO2 WHERE O.D. = 1/2", L = 24½</p> 
<p>C</p>	<p>6" leads are attached to the screw terminals EXAMPLE PART NO. Q202416C15 WHERE O.D. = 5/8", L = 24½</p> 
<p>D</p>	<p>Termination is designed such that the ceramic diameter does not exceed quartz tube. Available in 1/2" diameter only. EXAMPLE PART NO. Q162416D12 WHERE O.D. = 1/2", L = 24½</p> 
<p>F</p>	<p>Back disconnects type retaining clip. For use UH300L, AT25 thru A127 sockets. Available in 1/2" diameter only EXAMPLE PART NO. Q162416F12 WHERE O.D. = 1/2", L = 24½"</p> 
<p>H</p>	<p>Comes with 6" leads standard. Available in 1/2" diameter only Ease of mounting slot. This design is popular with ruby quartz tube for cheese melting. EXAMPLE PART NO. Q162416H08 WHERE O.D.= 1/2", L = 24½"</p> 

Terminations and Style

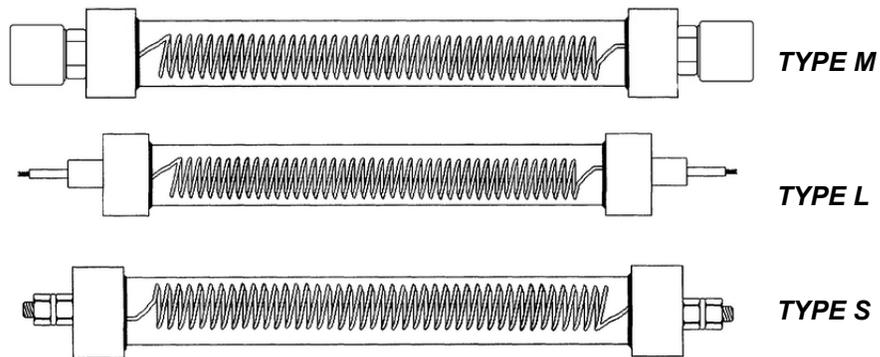
TYPE	DESCRIPTION
<p>L</p>	<p>Comes with 6" standard leads in diameters 3/8", 1/2" and 5/8". EXAMPLE PART NO. Q121324L09 WHERE O.D. = 3/8", L=13 3/4"</p> 
<p>M</p>	<p>1/2" round aluminum ferrules, screwed on the terminal for slip fit into supporting clip assembly. EXAMPLE PART NO. Q202416M12 WHERE O.D. = 5/8", L =24 1/2"</p> 
<p>N</p>	<p>Same as type "M" except a slotted aluminum bracket is supplied to mount with a 1/4" bolt. EXAMPLE PART NO. Q202416N07 WHERE O.D. = 5/8", L = 24 1/2"</p> 
<p>P</p>	<p>Comes with formed nickel pins for power source and support. Pins are normally attached to screw terminals. EXAMPLE PART NO. Q162000P12 WHERE O.D. = 1/2", L = 20"</p> 
<p>R</p>	<p>A retaining clip is used to hold the ceramic cap and quartz together. Available in 1/2" diameter only. 6" leads standard. EXAMPLE PART NO. Q161812R14 WHERE O.D. = 1/2", L = 12 3/8"</p> 

Terminations and Style

TYPE	DESCRIPTION
S	<p>Most standard type has 10-32 x 1/2" screw terminals in diameters 1/2" and 5/8". 3/8" heater has 8-32 x 1/2" screw terminals.</p> <p>EXAMPLE PART NO. Q202416S02 WHERE O.D. = 5/8", L = 24 1/2"</p> 
T	<p>Termination is designed for easy mounting using spring loaded sockets. Available in 3/8", 1/2" and 5/8" diameters.</p> <p>EXAMPLE PART NO. Q162416T11 WHERE O.D. = 1/2", L=24 1/2"</p> 
U	<p>Metal tab is provided for ease of mounting. Slot takes a #10 screw. Available in 1/2" diameter only.</p> <p>EXAMPLE PART NO. Q162416U10 WHERE O.D. = 1/2", L =24 1/2"</p> 
V	<p>Ceramic terminal cover used to protect and insulate screw terminals. Has an opening for leads to be connected to screws at right angle. Available for 10-32 (CT10-32) and 8-32 (CT8-32) screw terminals.</p> <p>EXAMPLE PART NO. Q202416V10 Where O.D. = 5/8", L = 24 1/2"</p> 
W	<p>Bare twisted wire exits the end of ceramic cap. Available in 3/8", 1/2", and 5/8" diameters.</p> <p>EXAMPLE PART NO. Q161800W12 Where O.D. =1/2", L = 18"</p> 

Standard Sizes and Ratings

DIAMETER INCHES	SHEATH LENGTH	VOLTS	WATTS	CATALOG NUMBER
3/8	14	120	480	Q121400L02
3/8	14	240	480	Q121400L03
3/8	20	120	720	Q122000M02
3/8	20	240	720	Q122000M03
3/8	38	120	1450	Q123800L01
3/8	38	240	1450	Q123800L02
3/8	48	120	1900	Q124800S02
3/8	48	240	1900	Q124800S03
1/2	18	120	900	Q161800L05
1/2	18	120	900	Q161800S05
1/2	18	240	900	Q161800S02
1/2	26	120	1200	Q162600S05
1/2	26	240	1200	Q162600S06
1/2	36	120	1800	Q163600S03
1/2	36	240	1800	Q163600S04
1/2	50	120	2400	Q165000S04
1/2	50	240	2400	Q165000S05
1/2	66	120	1540	Q166600M03
1/2	66	240	1540	Q166600M04
1/2	72	120	2780	Q167200S02
1/2	72	240	2780	Q167200S03
5/8	24	120	1075	Q202400S05
5/8	24	240	1075	Q202400S06
5/8	30	120	1375	Q203000S02
5/8	30	240	1375	Q203000S03
5/8	34	120	2500	Q203400M03
5/8	34	240	2500	Q203400M01
5/8	50	120	3400	Q205000S05
5/8	50	240	3400	Q205000S06
5/8	60	120	2875	Q206000S05
5/8	60	240	2875	Q206000S02
5/8	72	120	2000	Q207200M04
5/8	72	240	2000	Q207200M03
5/8	74	120	5650	Q207400M11
5/8	74	240	5650	Q207400M03



General Electric: T3 Lamps

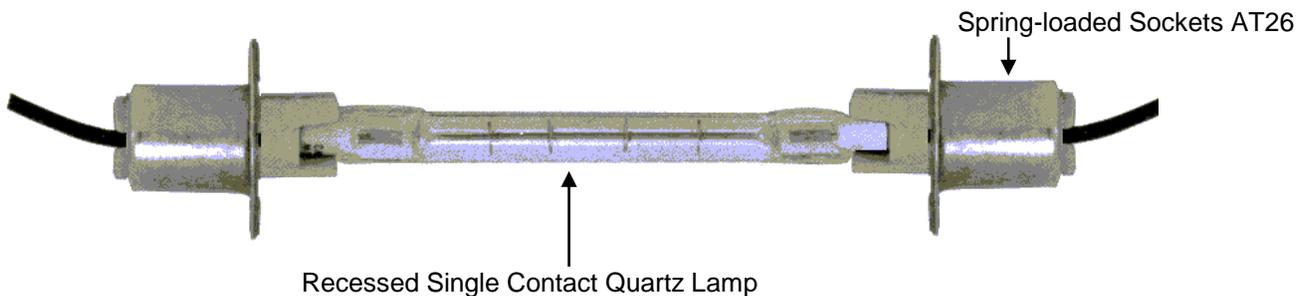


STANDARD SIZES AND RATINGS

PART NO.	PRODUCT CODE	WATTS	VOLTS	MAX. OVERALL LENGTH	LIGHTED LENGTH	BURN POSITION	TERMINATION
QH375T3/CL/7	38893	375	115-125	8-11/16	5-1/16	UNIVERSAL	RECESSED POINT
QH500T3/CL/7	21787	500	115-125	8-7/8	4-7/8	UNIVERSAL	RECESSED POINT
QH1600T3/CL/7	22699	1600	200-220	19-5/8	15-3/4	HORIZONTAL	RECESSED POINT
QH1600T3/CL/7	22691	1600	230-250	19-5/8	15-3/4	HORIZONTAL	RECESSED POINT
QH2500T3/CL/7	22837	2500	460-500	28-5/8	24-7/8	HORIZONTAL	RECESSED POINT
QH300T3/CL	39019	300	120	8 15/32	4-3/16	UNIVERSAL	LEADS
QH375T3/CL	21337	375	115-125	8-12/16	5-1/16	UNIVERSAL	LEADS
QH500T3/CL	21788	500	115-125	8-12/16	4-13/16	UNIVERSAL	LEADS
QH1000T3CL	22355	1000	200-220	13-3/16	10	HORIZONTAL	LEADS
QH1000T3CL	22357	1000	230-250	13-13/16	10	HORIZONTAL	LEADS
QH1000T3CL/1	22358	1000	230-250	11-7/8	10	HORIZONTAL	LEADS
QH1200T3/CL	22531	1200	144	8-13/16	6-1/8	HORIZONTAL	LEADS
QH100T3/2CL/HT	22365	1000	230-250	13-13/16	10	HORIZONTAL	LEADS
QH1200T3/CL/HT	22532	1200	144	8-13/16	6-3/16	HORIZONTAL	LEADS
QH2M/T3/1CL/HT	22789	2000	230-250	11-15/16	9-11/16	HORIZONTAL	LEADS
QH2M/T3/1CL/HT/VB	15551	2000	230-250	11-15/16	9-11/16	UNIVERSAL	LEADS
QH1600T3/CL	22686	1600	200-220	19-13/16	15-7/8	HORIZONTAL	LEADS
QH1600T3/CL	22695	1600	277	19-13/16	15-7/8	HORIZONTAL	LEADS
QH1600T3/CL	22688	1600	230-250	19-13/16	15-7/8	HORIZONTAL	LEADS
QH3800T3/CL/VB	22878	3800	550-600	41-13/16	38	UNIVERSAL	LEADS
QH2500T3/CL	22838	2500	460-500	28-13/16	24-7/8	HORIZONTAL	LEADS
QH3650T3/CL/5	10872	3650	480	41-5/8	38	HORIZONTAL	LEADS
QH3800T3/CL	22875	3800	550-600	41-13/16	38	HORIZONTAL	LEADS
QH2M/T3/CL/HT	22790	2000	230-250	13-13/16	10	HORIZONTAL	LEADS
QH5M/T3/1CL/HT	22900	5000	575-625	28-13/16	25-5/16	HORIZONTAL	LEADS
*QH2MT3/CL/HT/R	12716	2000	230-250	13-15/16	11-1/16	HORIZONTAL	LEADS

*Comes with built-in reflector.

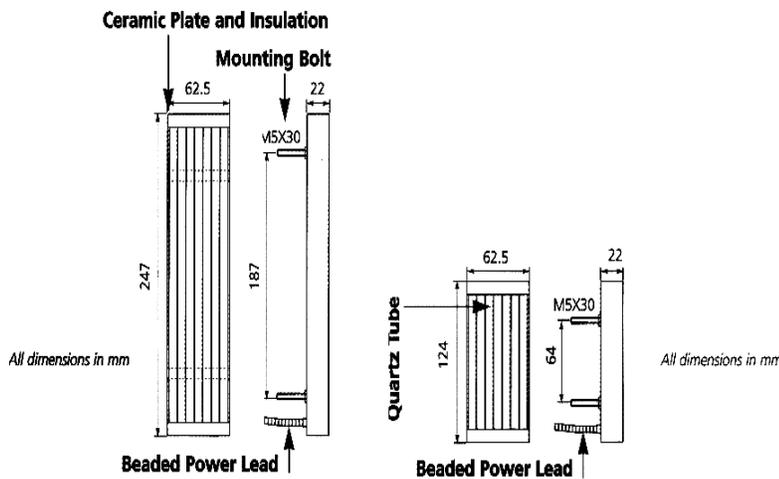
Recessed Point Terminal Lamp Shown Mounted in A Pair of Sockets



QUARTZ TUBE PANEL HEATERS - QTP

Introduction

Quartz Tube Panel Heaters provide infrared radiation in medium wavelength range of 1.5 to 5.6 microns. They are most cost effective in systems with long heater off cycles as they reach operating temperature in a matter of seconds. Being similar in size to Ceramic Emitters, they can easily be used in systems where zone control of the heater area is a requirement. They have a recommended radiation distance of 100-200mm.



TECHNICAL INFORMATION

Quartz Infrared heaters consist of a wound ceramic coil which run through a series of quartz tubes, all of which is incased in a highly reflective aluminized steel body. The reflective body ensures a low loss of energy from the back of the heaters. Heaters come in different ranges of wattage and voltage, with 220V/240V being standard. Variations on wattage and voltage are available on request. The standard dimensions are described by the Full Quartz Tube, 247 x 62.5 x 22mm (QTP-L) and Quartz Element, 124 x 62.5 x 22mm (QTP-S). Quartz Elements can also be supplied with a built-in type K thermocouple.

QTP-L 9-3/4" (247mm) Length		
Part Number	Watts	Volts
QTP-L200-240	200	240
QTP-L250-240	250	240
QTP-L400-240	400	240
QTP-L650-240	650	240
QTP-L1000-240	1000	240

QTP-S 4-15/16" (124mm) Length		
Part Number	Watts	Volts
QTP-S200-240	200	240
QTP-S250-240	250	240
QTP-S400-240	400	240
QTP-S500-240	500	240

Accessories

Spring Loaded Socket Front Flange Mounting

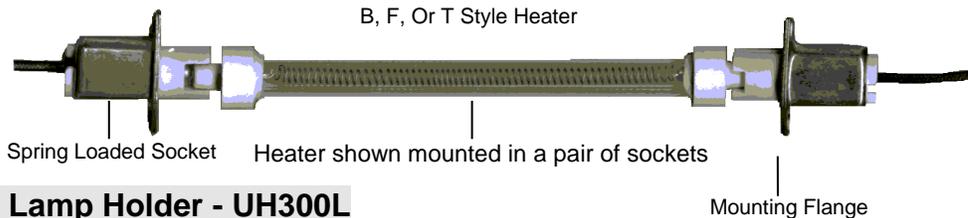
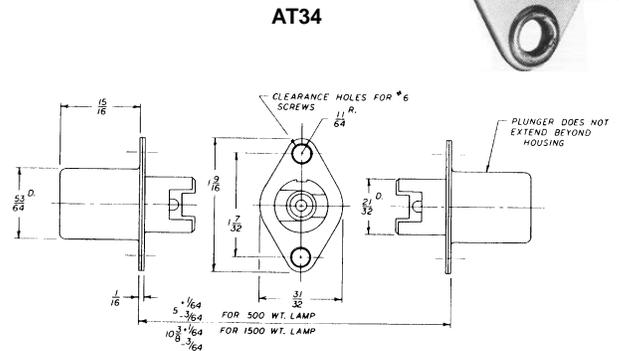
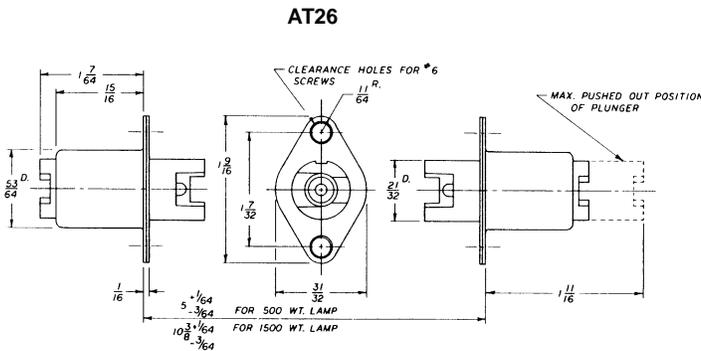
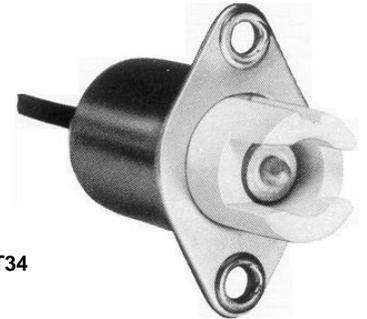
This one-piece porcelain body withstands high ambient temperatures. Plunger extends beyond the nickel-plated steel housing and mounting bracket on AT 26 style sockets. The lampholder is assembled with silver-plated solid copper recessed contact. The body has access slots for easy lamp mounting. Standard leads are 18", # 18 gauge 250°C. TXGT available from stock. SF-1, SEW-1, 200°C wire leads are also available with longer lead-time.

Features

- Withstands high Temperatures
- Easy Mounting
- Variety of Mounting Styles
- Very Economical
- Absorbs Vibration
- Stainless-Steel Spring
- Maintains Contact

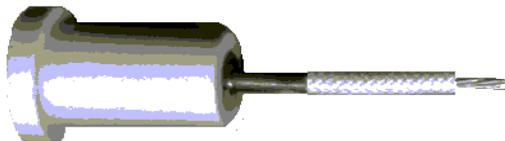
ITEM	CAT.#	DESCRIPTION	TEMP RATING WIRE LEADS	RATING
1	AT26	18", #18 TXGT LEADS	250°C	3000W-600V
2*	AT34	18", #18 TXGT LEADS	250°C	3000W-600V

* Available from stock



Quartz Lamp Holder - UH300L

Spring Loaded Socket is used for fast disconnects. Supplied with locking washer, which is pushed on after installing. For use with type "B" and type "T" heaters.



Locking washer



Drill 11/16" dia. hole in mounting wall plate.

MAXIMUM RATING:

3000 Watts, 480 Volts, 15 Amps

Maximum Operating Temperature: 350°C (660°F)

Body Material: Steatite/ Plated Steel/ Stainless Steel

Wire Leads: Any UL Recognized and CSA certified Wire 14 or 16 GA. 200°C Min, 600V Min.

18" lead SF2, 16GA. 200°C, 600V is standard.

Other types of leads and in different lengths are also available.

Supporting Clip Assembly

Used with type "M" heaters for supporting Aluminum ferrule and conducting current to the heater.



Order Code AP 1401