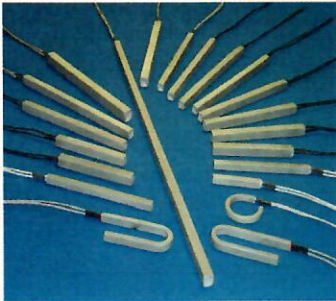


# Square Cartridge Heaters



**Square heater** assembly consists of an element wound on shaped ceramic cores. High precision tolerances can be maintained if required. All standard imperial size square cartridge heaters and related length limits are outlined in the tables shown below. Special cross sectional dimensions including metric can be produced as a specialty item. Lengths not listed in the standard range can also be supplied when required.



## ELECTRICAL TOLERANCES

Standard electrical tolerances are shown in the table below. High precision tolerances can be held if required. Square cartridge heater electrical limits for a standard, two lead construction are listed in the tables shown below. Special units with multiple leads are available in single phase and three phase wiring systems, permitting the use of higher ratings than those shown.

### POWER (Watts)

Standard 1/4" through 3/4" square cartridge cross section dimensions +5%, -10%

### RESISTANCE (Ohms)

Standard 1/4" through 3/4" square cartridge cross section dimensions +10%, -5%

Resistance increases with temperature. All cartridges are designed to a resistance value 5% lower than the calculated resistance.

### CAMBER

.015 inches per foot. Slight camber does not normally present a problem since the heater will flex sufficiently for insertion into smooth milled channels and with light clamping force will readily conform to flat surfaces.

## CROSS SECTION LENGTH:

See cross sectional tolerances in the tables.

All units < 4.5" long +/- 3/32"

All other units > 4.5" long +/- 2% of length



Imperial Electrical Limits			Minimum Watts/Heater Length @ 120V			Max. Watts @ 120V/240V/480V		
Nominal Cross Section	Max. Volts	Max. Amperes	1 1/4" Length	1 1/2" Length	2" Length	120 Volts Single Phase	240 Volts Single Phase	480 Volts Single Phase
3/16	240	4.4	100	55	40	525	1050	-
1/4	240	4.4	100	55	40	525	1050	-
5/16	240	4.4	100	55	40	525	1050	-
3/8	240	6.7	65	35	25	800	1600	-
1/2	480	9.7	40	25	20	1160	2320	4000
5/8	480	23.0	35	20	15	2760	5520	10000
3/4	480	23.0	35	15	10	2760	5520	10000

Imperial Cross Sectional Specifications			Standard Length Limits			
Nominal Cross Section (Inches)	Actual Cross Section (Inches)	Actual Cross Section (Millimeters)	Minimum Length (Inches)	Minimum Length (Millimeters)	Maximum Length Standard (Inches)	Maximum Length Standard (Millimeters)
3/16	.183 +/- .002	4.65	1 1/4	31.8	15	381.0
1/4	.246 +/- .002	6.25	1 1/4	31.8	36	914.4
5/16	.308 +/- .002	7.82	1 1/4	31.8	36	914.4
3/8	.371 +/- .002	9.42	1 1/4	31.8	48	1219.2
1/2	.496 +/- .002	12.60	1 1/4	31.8	60	1524.0
5/8	.621 +/- .002	15.77	1 1/2	38.1	72	1828.8
3/4	.746 +/- .002	18.95	1 1/2	38.1	72	1828.8