Warning

Hazard of fire: Do not mount ceramic emitters near combustible materials or within a hazardous area. Ceramic emitters should never be used in an explosive atmosphere.

Electrical Shock: Disconnect electrical power before servicing emitters. All electrical wiring must be done in accordance to local electrical codes by a qualified service technician.

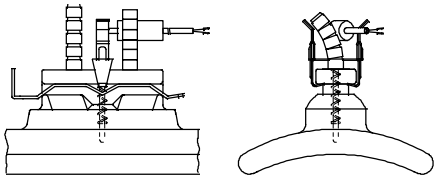
Do not touch the ceramic emitters after power is applied to the emitters.

Never immerse ceramic emitters in liquids.

Severe Burns: Ceramic emitters operate at high temperatures. Do not touch emitters after power is applied to the emitters.

*** Do not operate emitters at a surface temperature greater than 1292°F (700°C)

Thermocouples



Thermocouples are available in two standard configurations. The replaceable thermocouple (shown above), and the cast-in thermocouple. The replaceable thermocouple is a unique spring formed thermocouple specifically designed for the *Salamander* ceramic infrared emitter. It is available in type J or K style. The thermocouple is inserted into the thermowell located in the mounting tower of the emitter. The spring clip locks onto the shoulder of the mounting tower giving a secure and consistent thermocouple placement within the emitter. To remove the thermocouple simply release the spring clip and remove the thermocouple from the ceramic emitter.

The cast-in thermocouple is available only in a type K style. Since the thermocouple is placed near the internal resistance wire, the thermocouple is considered fast responding. This type of thermocouple is standard throughout the industry.

Replaceable T/C Part Number:	J-24-A	Type J
	K-24-A	Type K
Cast-In T/C Part Number:	-FRK	Type K

Mor Electric Heating Assoc., Inc.

Salamander Ceramic Emitter Installation Instructions

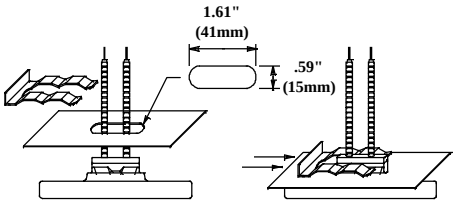
Mor Electric Heating Assoc., Inc.
5880 Alpine N.W., Comstock Park,
Michigan 49321, USA
Tel: 1-616-784-1121 or 1-800-442-2581
Fax: 1-616-784-7775
e-mail: sales@infraredheaters.com

CE

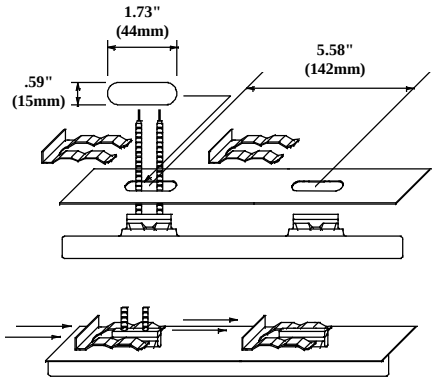
E.C. Declaration of Conformity: All Salamander Ceramic Emitters conform with the protection requirements of Council Directive 89/336/EEC relating to the U.K. Electromagnetic Compatibility Regulations of 1992 as set forth in regulation 17 governing benign apparatus.

Recognized to U.S. and Canadian requirements under the Component Recognition Program of Underwriters Laboratory, Inc.
Up to 240 Volt Only.

Emitter Mounting, Single Tower



Emitter Mounting, Double Tower



Mount emitters in a 20 to 24 gauge [.036" (.9mm), .025" .6mm)] aluminized steel or stainless steel reflector. The single piece retaining clip(s) secures the emitter to the reflector as shown. Two piece mounting clips are available if required. **Do not use excessive force when installing clips, damage to the mounting tower may result.**

Wiring & General Emitter Operation

Electrical connections should be made directly through high temperature ceramic terminal blocks (sold separately). Nickel plated copper wire, with insulation suitable for the load amperage and operating temperatures, must be used to make the power connections to the ceramic terminal blocks. **All electrical wiring must be done in accordance with local electrical codes by a qualified service technician.**

For best results, the surface temperature of the *Salamander* ceramic infrared emitter should be controlled using an **open-loop** (percentage timer) or a **closed-loop** (thermocouple feedback with digital temperature control) **system**. The infrared emission intensity is directly related to the surface temperature of the ceramic body (see the *Salamander* technical manual for more details).

Incorporated into the front surface of the *Salamander* ceramic emitter is a **red color changing decal**. As the ceramic emitter increases in temperature this decal will begin to change from red to black (transistion temperature is approximately 400°F (205°C)). The decal will remain "black" until the temperature of the emitter falls below the transiton temperature where it will then return to its original red color. Along with the color changing decal, the emitters can also have color changing glaze. The yellow glaze will start to turn to a butterscotch/brown color at approximately 200°F (93°C).

Do not operate the *Salamander* ceramic emitters at a surface temperature greater than 1292°F (700°C).

Do not operate the *Salamander* ceramic emitters at voltages in excess of their rated voltage.

ESES-Installation Instructions

The *Salamander* ESES (Solid Edison Screw Cap Emitter) must be installed into an appropriately sized porcelain Edison base and reflector **All electrical wiring must be done in accordance with local electrical codes by a qualified service technician.**

Warning: Hazard of fire

Do not mount emitters near combustible materials or within a hazardous area.

Do not operate emitters at voltages in excess of the rated voltage.