

## Sales Bulletin – Source Four CE Heat Information February 2010

**ATTENTION: The following luminaire information is for reference only. Resolution of any site-specific issues, i.e. HVAC needs, fire, safety, or any other heat related installation suitability questions are the sole responsibility of the customer.**

ETC is happy to provide the following heat information on Source Four luminaires to be used by persons familiar with the luminaire location and qualified to speak to the safety of surrounding materials.

Please note:

- The following factors may be used, but are not the sole factors for determining the suitability of a location for a high-temperature luminaire:
  - Composition, colour and texture of the surrounding materials
  - Ambient room temperature
  - Airflow
- Temperature measurements taken in ambient air at any distance from a luminaire in a lab situation are not useful as safety guidelines for luminaire mounting, in that they cannot accurately factor in the above or any other variables.

### How much “Heat” in BTUs does an ETC Source Four CE luminaire emit?

For each watt of energy consumed, the fixture will emit 3.4144 BTU's per hour. Keep in mind that Source Four, Source Four PAR and Source Four jr luminaires absorb more of the infrared light spectrum than most typical fixtures, and therefore transmit less heat to the light beam.

Therefore:  $575W * 3.4144 = 1,963.28$  BTU's per hour (Source Four HPL lamp)  
 $750W * 3.4144 = 2,560.8$  BTU's per hour (Source Four HPL lamp)

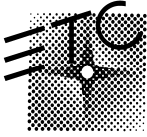
Additionally we periodically get asked about the amount of heat in the light beam compared to the amount of heat absorbed by the fixture. Below is a table showing some representative figures.

Note 1: Regardless of how much heat is projected by the beam or dissipated by the fixture housing, the total BTU per hour measurement is the same as computed by the above equation.

Note 2: The dramatically lower amount of heat in the beam of our luminaires with cold mirror reflector: Source Four and Source Four PAR MCM, when compared to fixtures with typical reflectors.

### Typical heat dissipation: (All measurements are BTU's per Hour)

Model	Projected beam	Luminaire body dissipation	Total
Source Four CE 750W	230	2330	2560
Source Four CE 575W	180	1780	1960
Source Four PAR EA CE 750W	1150	1410	2560
Source Four PAR EA CE 575W	880	1080	1960
Source Four PAR MCM CE 575W	145	1815	1960
Source Four HID CE 150W	(not available)	(not available)	513
Typical PAR 64 1000W	~1100	~2314	3414
Typical Fresnel 2000W	(not available)	(not available)	6828



## Gate temperature of Source Four CE profile spots

In a test condition" created by placing one shutter blade into gate covering 1/2 of the field, and placing the thermal probe on the backside (shaded) of the shutter. The A size gate temperatures were recorded as follows:

Using HPL 575W 300hr = 328°C max.

Using HPL 750W 300hr = 419°C max.

Note: We have not tested the 150W HID lamp, but roughly estimate the gate temp between 150°C ~ 230°C.

## Surface Temperatures

The following temperatures are normalised for the maximum of 45°C ambient room temperature, with free air convection.

### S4/S4 Zoom CE 750W

**Lamp Focus Knob:** 210°C max.

**Exterior Rear Housing Skin:** 217°C max.

**Exterior Front Barrel Skin:** 91°C

**Projected Heat:** Lighted objects will not exceed a temperature of 90°C from projected light at a horizontal distance of 0.8m or greater.

### S4/S4 Zoom CE 575W

**Lamp Focus Knob:** 180°C max.

**Exterior Rear Housing Skin:** 200°C max.

**Exterior Front Barrel Skin:** 85°C

**Projected Heat:** Lighted objects will not exceed a temperature of 90°C from projected light at a horizontal distance of 0.7m or greater.

### S4jr/S4jr Zoom CE 575W

**Lamp Focus Knob:** 210°C max.

**Exterior Rear Housing Skin:** 235°C max.

**Exterior Front Barrel Skin:** 110°C

**Projected Heat:** Lighted objects will not exceed a temperature of 90°C from projected light at a horizontal distance of 0.6m or greater.

### S4PAR MCM CE 575W

**Lamp Cap Handle:** 185°C max

**Reflector Fins:** 270°C max.

**Exterior Front Barrel Skin:** 175°C max.

**Projected Heat:** Lighted objects will not exceed a temperature of 90°C from projected light at a horizontal distance of 0.9m or greater.

### S4PAR EA CE 575W

**Lamp Cap Handle:** 145°C max.

**Reflector Fins:** 175°C max.

**Exterior Front Barrel Skin:** 165°C max.

**Projected Heat:** Lighted objects will not exceed a temperature of 90°C from projected light at a horizontal distance of 2.0m or greater.

### S4jr CE HID 150W

Note: Temperatures are normalised for 40°C ambient room temperature, with free air convection.

**Exterior Rear Housing Skin:** 103°C max.

**Exterior Rear Burner Assembly:** 100°C max.

\* Source Four junior HID luminaires tend to run more hot than full-sized Source Four luminaires with the same wattage lamp. This is caused by less metal to dissipate the same amount of heat than the full sized luminaire.