

## Safety

The lamp cover is secured through its wiring harness for additional safety. Multi-point grounding is provided throughout for complete assurance of safe operation. The fixture and all electronics comply with current UL, ETL, C-ETL, CE, FCC, CSA, and EMC standards for professional lighting fixtures.

## Specifications

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### Mechanical

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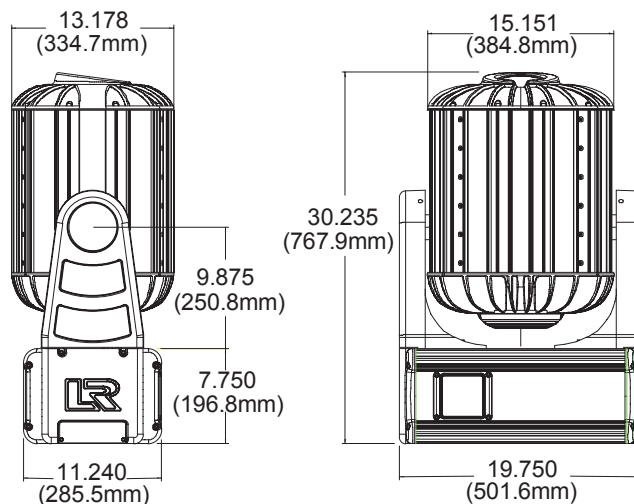
Height: 767.9 mm (30.24 in.)

Width: 501.6 mm (19.75 in.)

Depth: 285.5 mm (11.24 in.)

Weight: 71.67 kg (158 lbs.)

For additional dimensions, see Figure Intro-1.



*Figure Intro-1. ES-1 dimensions*

### Electrical

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Factory setting: 277VAC, 60 Hz

Voltage rating: 100V, 120V, 230V, 277V

Power consumption:  
7.0 A @ 100V  
5.8 A @ 120V  
3.0 A @ 230V  
2.5 A @ 277V

Rated power consumption: 700W

Rated frequency: 50/60 Hz

Power factor:	100V, 50 Hz: 0.85
	120V, 60 Hz: 0.96
	230V, 50 Hz: 0.87
	277V, 60 Hz: 0.94

Maximum winding temperature,  $T_w$ : 180° C (356° F)

Maximum capacitor temperature,  $T_c$ : 85° C (185° F)

### Environmental

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Ingress Protection:	IP 66
E.P.A. (Effective Projected Area):	3.2 sq. ft.
Maximum ambient temperature, $T_a$ :	40° C (104° F)
Minimum distance to lighted object:	1.0 meter (3.28 feet)
Minimum distance to flammable objects:	1.0 meter (3.28 feet)



**WARNING:** 1) class I equipment - For continued protection against electric shock, connect this equipment to an earthed (grounded) power source only.



2) do not mount on a flammable surface.

### Cable and Connector Specifications

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DMX data cables:

Belden® 9841 or equivalent (meets specifications for EIA RS-485 applications) with the following characteristics:

- 2-conductor twisted pair plus a shield
- maximum capacitance between conductors - 30 pF/ft.
- maximum capacitance between conductor and shield - 55 pF/ft.
- maximum resistance of 20  $\Omega$  / 1000 ft.
- nominal impedance 100-140  $\Omega$

DMX data connectors: 3-pin male and female XLR connectors

DMX data terminators: Male XLR connector with 120 ohm terminator

### Optical System

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#### Dichroic Glass

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Diameter	44.323 mm $\pm$ 0.25 (1.745 in. $\pm$ 0.010)
Thickness	1.778 mm $\pm$ 0.25 (0.070 in. $\pm$ 0.010)

Note: *the dichroic glass specifications for ES-1 are identical to Studio Spot 575, Studio Color 575, Cyberlight, Cyberlight CX, and Cyberlight SV.*

## Effect Glass

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Diameter: 36.322 mm  $\pm$  0.25 (1.430 in.  $\pm$  0.010)  
Image area: 31.750 mm  $\pm$  0.25 (1.250 in.  $\pm$  0.010)  
Thickness: 3.175 mm  $\pm$  0.25 (0.125 in.  $\pm$  0.010)

Note: *the effect glass specifications for ES-1 are identical to Studio Spot 575, Technobeam, Technopro, and Technoray.*

## LithoPatterns

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Resolution: 3300 d.p.i.  
Diameter: 36.449 mm  $\pm$  0.15 (1.435 in.  $\pm$  0.006)  
Image area: 31.750 mm  $\pm$  0.25 (1.250 in.  $\pm$  0.010)  
Thickness: 1.778 mm  $\pm$  0.25 (0.070 in.  $\pm$  0.010)

Note: *use the above specifications for metal gobos.*

## Lenses

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*Table Intro-1. Lens specifications*

Lens	Minimum Focal Distance	Effective Focal Length	F-Stop	Elements
13°	1 M - $\infty$	140 mm	1:2	4
18°	1 M - $\infty$	100 mm	1:1.6	4
30°	1 M - $\infty$	60 mm	1:1.8	5

Note: *to determine which lens best suits your application, refer to "Calculating Beam Diameters" on page C-6.*

 1m **WARNING: risk of fire. Never light objects closer than 1 M.**

## Lamps

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Lamp type: Philips® MSD 575  
MSD 575 color temperature: 5600 Kelvin



**WARNING: use only M Series, GX 9.5 Base, 575 watt, metal halide type lamp.**

Note: *the above lamp was specifically designed for use in ES-1 and EC-1. Mixing lamp types will result in undesirable color points between fixtures.*