

# ECO Spot™ LED B40E User Manual

The ECO Spot LED40DE is intended for exterior applications but is also suitable for interior use. Thank you for choosing an ECO Spot™ Gobo projector. This unit is equipped with a fan cooled heat pipe to keep the 40W High Power LED running cool. It is also available as interior version (ES-B40).

Please read this manual before installing or operating this fixture, follow the safety precautions listed below and observe all warnings.



## WARNING!

**To prevent damage to the LED, always connect the driver cable to the projector FIRST before plugging it into the power outlet.**

### Package Contents

- ✓ Projector, External LED Driver, Test Gobo, Spare gobo retaining ring and spare drive belt, Gobo adapter ring for E-Size Gobos

### Safety Information

- Place your fixture at a suitable place with good air flow.
- Keep flammable materials away from the fixture.
- Minimum distance to flammable material = 1 ft (0.3m).
- Provide a minimum clearance of 4 in (10cm) around air vents.
- Use only genuine spare parts for part replacement.
- Do not look directly into the lamp; it can result in eye damage.
- Always unplug the unit from the power mains before any service is done.
- Light fixtures should be installed and maintained only by qualified personnel with experience in lighting equipment and general electrical experience.

### Electrical Safety

- Disconnect the fixture from AC power before handling the fixture.
- Always ground (earth) the fixture electrically.
- Use only a power source that complies with local building and electrical codes and has both, overload and ground-fault protection.
- Do not use the fixture if the power cable or power plug is in any way damaged, defective or wet, or if they show signs of overheating.

### Handling Instructions

- There is a weatherproof connector between the driver (power supply) and projector, which can be opened for easier handling. **Always make this connection first before powering up the driver, otherwise the LED can be damaged by the power surge.**
- Before the initial start-up, please unpack and carefully check for damage caused during transportation.
- Place your fixture at a suitable place with good air flow.
- Make sure there are no flammable materials close to the lamp.
- When suspending the fixture above ground level, verify that the structure can hold at least 10 times the weight of all installed devices.
- Verify that all external covers and rigging hardware are securely fastened and use an approved means of secondary attachment such as a safety cable.

### Warranty

One Year from Date of Purchase. Keep your receipt for reference and contact your dealer in case of warranty issues.

### Projection Lenses

The projector accommodates interchangeable projection lenses to allow optimizing the projection size and resulting brightness at varying distances. The more narrow the lens, the smaller and brighter the image will be at a given distance. For example, cutting the projection size in half, will quadruple its brightness.

### Gobo Rotator

If the fixture is equipped with a gobo rotator, it can be turned on/off with the silver push-button on the front plate underneath the lens. There are no controls for rotating speed or direction.

### Focusing

- Power up the projector.
- If the fixture is equipped with a gobo rotator, turn it on, once the gobo projects in the desired position, turn it off.
- Loosen the outer ring around the lens that acts as a water seal.
- Focus the projection by twisting the lens in and out until the image is well focused. When used for the first time, the lens will often need to be twisted outwards many rotations to reach the focusing point. When in doubt, keep going.
- Re-tighten the outer ring to ensure a tight seal of the lens.

### Multi-functional Yoke

- The yoke can slide over the whole length of the fixture body to accommodate a wide range of pointing directions.
- The yoke can also serve as stand.
- The yoke can be screwed to a wall or ceiling or fastened with a C-clamp

### Gobo Placement (see *Specifications* for Gobo Dimensions)

The ES-LED40DE uses D-Size **gobos** or E-Size gobos with an adapter ring. See the Specifications for exact dimensions. For max. image size and brightness use D-Size gobos. The recommended gobo image diameter is 32mm. An Image Diameter of up to 40mm is possible with some loss in focusing quality for optimal focus, stay within 28mm image size.

- Unscrew the thumbscrews to remove the front cover with the projection lens.
- Push the two pins of the gobo retaining ring together and pull out the retaining ring. Carefully remove the old gobo and replace it with the new gobo.
- **Tip:** Tilt the projector forward while placing the palm of your hand inside, the old gobo will fall into your hand.
- If you have a glass gobo, place the more reflective side towards the light bulb.
- Replace the retaining ring and make sure it evenly pushes the gobo all the way back.
- Replace the front cover and adjust the focus by threading the projection lens in or out.



**Line Voltage**

100-240V, 50/60Hz, 0.6A, 48W

**Ambient Operating Temperature**

-13 to 104°F (-25 to 40°C)

**Dimensions / Weight**

**Body without yoke:**

10.5 x 6 x 3.75in (L x W x H)  
(267 x 153 x 95mm)

The projection lens adds 0.5 to 2in (12 to 50mm) to the length.

**Height with yoke:** 7.75in (197mm)

**Weight** 7lbs (3kg)

**Gobo Dimensions D-Size**

Metal or Glass Gobos and Dichroic filters

**The projector takes D-Size gobos:**

**Outer Diameter (OD):** 53mm

**Image Diameter (ID):** 32mm

**Max Thickness:** 4mm

Larger ID up to 40mm is possible with some loss in focusing quality, for optimal focus stay within 28mm image size. An adapter for the smaller **E-Size gobos** is available.

**LED Lamp**

- Extremely high light density for ultra-efficient projection.
- Power: 40W
- Bulb life 50,000h
- Color Temperature 6,000k, +/- 500k
- Rated Luminous flux: 3,000lm
- Effective luminous flux: 2,400lm

**Lens Options**

The projector can be equipped with standard ECO Spot projection lenses.

A larger focal length (f) makes a smaller projection angle and therefore a smaller but brighter image. Currently these lenses are available:

- Wide f=50mm  
35°/25° for D/E-Size gobos
- Medium f=70mm  
28°/20° for D/E-Size gobos
- Semi-Narrow f=100mm  
21°/15° for D/E-Size gobos
- Narrow f=140mm  
14°/10° for D-Size gobos

**IP Ratings**

- LED Driver: IP65
- Fixture: equivalent to IP62

ECO Spot™ Photometrics							ECO Spot is a Trademark of Globus												
Model Gobo Size	Color Temp.	Lens	Beam Mult.	Effective lm	CD	Value	PROJECTION DISTANCE IN FEET (ft)												
							3	6	9	12	15	18	24	30	36	42	64	88	
ES-LED-B40 ES-LED-B40E  D-Size	6000k +/- 500k	140mm (14°)	0.28	1822	30,528	Image Diam. (ft) Illumination (fc)	2.9	3.0	3.8	4.5	6.0	7.6	9.1	10.6	16	22			
		100mm (21°)	0.36	1797	17,280	Image Diam. (ft) Illumination (fc)	2.2	3.3	4.4	5.5	6.6	8.7	10.9	13.1	15	23			
		70mm (28°)	0.48	1800	10,080	Image Diam. (ft) Illumination (fc)	1.5	2.9	4.4	5.9	7.4	8.8	11.8	15	18	21			
		50mm (38°)	0.63	2378	7,632	Image Diam. (ft) Illumination (fc)	1.9	3.8	5.7	7.6	9.5	11.3	15	19	23	26			