

Tender Specifications



ECLFR2KVW

500W Variable White LED Fresnel

(2,700K – 5,600K)

with manual zoom 15° to 79°

1. General

1. The luminaire shall be a Variable White LED Fresnel with DMX control of intensity.
2. The luminaire shall be CE, UKCA, RCM compliant.
3. The luminaire shall comply with the USITT DMX-512 A and ANSI RDM E 1.20 protocol standards.
4. The luminaire shall be capable of delivering an output of 2'700K to 5'600K , featuring an average CRI, in excess of 94 Ra.
5. The luminaire shall feature an LED source with a power of 500 W.
6. The luminaire shall not infringe any Intellectual Property unless licenced by the owner.

1. Physical

1. The luminaire shall be constructed from a combinations of rugged die cast aluminium, free of burrs and pits, and high quality thermo plastic all finished in black.
2. The luminaire shall feature a Fresnel lens constructed from a light weight acrylic material that shall not create any sharp points in the case of breakage.
3. The luminaire shall feature a lens diameter not exceeding 250 mm.
4. The luminaire shall feature an integral frame holder including safety locks and a top latch.
5. The luminaire shall feature an adjustable yoke constructed from die-cast aluminium and finished in black that allows a minimum of 180° tilt rotation and 360° pan rotation.
6. The luminaire shall feature a secure locking mechanism for the tilt axis.
7. The luminaire shall feature an option for pole operated control of both the pan and tilt axes as well the zoom.
8. The luminaire shall feature control of beam diameter by knobs situated on both sides of the luminaire requiring no more than 3 complete revolutions for the full range of adjustment.
9. The luminaire shall feature integral power and electronics.

10. The luminaire shall weight no more than 18 kg with PO system.
11. The luminaire shall feature an active cooling system.
12. The luminaire shall be supplied with an eight leaf barn door.
13. The luminaire shall be supplied with a 28 mm extruded aluminium spigot suitable for attachment to industry standard accessories.
14. The luminaire shall be supplied with a filter holder.

1. LED Emitters

1. The luminaire shall feature a Variable White LED emitters customized for PROLIGHTS, with a total Rated power of 500 Watt, and Driven power of 450 Watt.
2. The luminaire shall feature an LED source consisting only of LED emitters from a know production batch and bin.
3. The luminaires shall feature only LED emitters rated for nominal 50'000-hours LED life to L70.
4. The luminaire shall feature a minimum of three hours burn-In test during its manufacturing process.
5. The luminaire shall feature adjustable PWM frequency to include 25'000 Hz.

1. Photometric documentation

1. The luminaire shall be supplied with a full and detailed photometric report measured by a calibrated two axis photogoniometer in a constant temperature environment and with the luminaire in a stabilised condition with not more than 0.5% variation in output over a 15 minute period.
2. The photometric report supplied with the luminaire shall detail CRI, CQS, TM-30 and spectral distribution at full output.
3. The photometric report supplied with the luminaire shall detail the spectral distribution of each constituent LED colour of LED source.
4. The photometric report supplied with the luminaire shall detail light level measured in lux and foot candles and beam diameter measured in meters and feet at 1 m, 2 m, 3 m

4 m, 5 m, 6 m, 7.5 m, 10 m, 15 m, 20 m, 25 m 30 m, 40 m distance with the luminaire at its smallest, middle and largest beam angle.

5. The photometric report supplied with the fixture shall include ISO LUX and candela diagrams, showing light distribution in both X and Y planes measured with the luminaire mounted at height of 10 meters.

1. Photometric performance

1. The luminaire shall meet the following minimum photometric performance requirements which should be supported by the photometric documentation:
 - The luminaire shall have a colour temperature from 2'700K to 5'600K (+/- 100 K).
 - The luminaire shall have a CRI in excess of 94 across the entire zoom range in all presets from 2'700K to 5'600K.
 - The luminaire shall have an output in excess of 19'711 lm at maximum beam angle with LED at full on.

1. Calibration

1. The luminaire shall be factory calibrated during its production process.
2. The luminaire shall permanently store calibration data on internal PCB.
3. The luminaire shall feature replacement LED source calibrated using the same method as the standard.
4. Fixtures not offering LED calibration shall not be acceptable.

1. Electrical

1. The luminaire shall feature an internal auto sensing power supply with an input range from 100 V to 240 V AC 50/60 Hz protect by on board fuse.

2. The luminaire shall feature a nominal power consumption of 450 W.
3. The luminaire shall feature a Neutrik® PowerCON True1 main input connector.
4. The luminaire shall feature a Neutrik® PowerCON True1 main through connector.
5. The luminaire shall feature an Amphenol 5 pin XLR connector for DMX input and DMX through.
6. The luminaire shall feature an on board OLED graphic display.
7. The luminaire shall be compatible with the USITT DMX-512A RDM protocol.
8. The luminaire shall support firmware upgrades using a dedicated UP-LOADER device using a 5 pin XLR connector.
9. The luminaire shall meet all requirements of the LVD (Low Voltage Directive) 2014/35EC and with the EMC (Electromagnetic Compatibility Directive) 2014/30/EU.

1. Optical

1. The luminaire shall offer continuous beam adjustment from 16° to 60°.
2. The luminaire shall feature a Fresnel lens constructed from a light weight acrylic material that shall not create any sharp points in the case of breakage.

1. Environmental

1. The luminaire shall feature IP 20 rating.
2. The luminaire shall be capable of operating in ambient temperature range of -20°C (-4°F) to +45°C (113°F).

1. Control And User Interface

1. The luminaire shall feature a temperature sensor which shall be accessible in real time via RDM.
2. The luminaire shall be compatible with the ANSI RDM E 1,20 standard.

3. Fixture not offering RDM compatibility features access or temperature monitoring via RDM shall not be acceptable.
4. The luminaire shall be equipped with multi-line OLED display for easy to read status reports and configurations changes.
5. The luminaire shall offer additional user definable options to including the Display time out option.
6. The luminaire shall feature local control using four buttons and three rotary clickable encoder.
7. The luminaire shall offer stand alone functionally including:
 - a) Fixtures can be linked together with standard DMX cable and controlled from designated master fixture up to 32 units linked.
 - b) Fixtures in stand-alone state shall restore to the setting preset to power cycling.
8. Fixtures without stand-alone operation featured described above shall not be acceptable.
9. The luminaire shall feature a range of control modes including:
 - 1/2/4/5 and 11 channels mode.

1. Dimming

1. The luminaire shall feature continuous smooth and linear dimming of intensity from 0% to 100%.
2. The luminaire shall feature control of intensity in 8 bit or 16 bit mode.
3. LED control shall be compatible with broadcast equipment in the following ways:
 - a) PWM control of LED levels shall be imperceptible to video cameras and related equipment.
 - b) PWM rates shall be adjustable by the user at the fixture if necessary to avoid any visible interference on video camera and related equipment.
4. The luminaire shall feature a minimum of 4 options for dimming curves, selectable from the on board menu.
5. Dimming curves shall be optimized for smooth dimming over longer time fades.

6. The LED system shall be digitally driven using high-speed pulse with PWM modulation.

1. Accessories

The following accessories shall be included in fixture supplied:

1. 28 mm conical connector adapter for stands or pantographs.
2. 8 way Leaf barn door.
3. Filter holder.
4. 16 A 3G 2.5 mm Power cable with Neutrik PowerCON TRUE – bare end.

The following accessories shall be available as an optional:

1. 3 Units flight cases, with 4 wheels and 8 handles to house 3 fixtures plus their accessories.
2. Up-loader Tool (UPBOX1) and it's PC Software.

Approved device shall be the PROLIGHTS ECLFR2KVW; no alternates or equals.