Tender Specifications

MOSAICOFX100FC

Image projector with dual animation wheel and
1 gobo/color slot, 100W RGBW LED source

1. General

1. The luminaire shall be an IP rated LED RGBW Exterior projector for outdoor installations with two controllable glass effect wheels with linear motion control, one gobo holder with manually index adjutment, one colour holder, both with magnetic attachment. The unit can be controlled via DMX/RDM, both wired and wireless and by on board 3 rotary push encoders.
2. The luminaire shall be feature with 15°, 30°, 50° and 70° optics, optimized for images or effects projection.
3. The luminaire shall be CE, UKCA, RCM compliant.
4. The luminaire shall comply with the USITT DMX-512 A and ANSI RDM E 1.20 protocol standards.
5. The luminaire shall feature an RGBW LED source with a rated power of 100 W.
6. The luminaire shall feature an LED source made with an RGBW LED array.
7. The luminaire shall not infringe any Intellectual Property unless licenced by the owner.

2. Physical

1. The luminaire shall be constructed of rugged die cast aluminium, free of burrs and pits.
2. The luminaire dimensions shall be:
   a) 289 mm (11.4”) from base of the enclosure to the tip of the lens baffling.
   b) 246 mm (9.7”) across the exterior dimensions of the yoke.
   c) Head length 222 mm (8.7”).
   d) The luminaire shall weigh 5,8 kg (12.7lbs).
3. The luminaire shall be able to be either truss-mounted or stand on a surface. Fixture shall be suitably designed for operation over or under mounted on a truss perpendicular to the ground.
4. The following shall be provided:
   a) The luminaire must include two (2) interchangeable effect wheels. Luminaires that have non-interchangeable effect wheels shall not be deemed acceptable.
   b) Interchangeable gobo shall have an outside diamter of 26.9 mm, and an image diameter of 22 mm for black/white and 20,5 mm for color.
   c) Gobo holder system must be able to manual index to any point on the 360° positioning of the gobo.

d) Rugged steel yoke with two mounting positions allowing 300+ rotations of the fixture within the yoke.

e) Positive locking, hand operated yoke clutch.

f) Inspectable Slot-door on the chassis for easy access to Gobos, Colour and Animation wheels replacement.

5. Power Supply, cooling, and driver electronics shall be integral to each luminaire.

3. LED Emitters

1. The luminaire shall feature a LED source emitter customized for Prolights with a Rated power of 100 Watt, and total Driven power of 100 Watt.
2. The luminaire shall feature an RGBW Led source.
3. The luminaire shall feature an LED source consisting only of LED emitters from a know production batch and bin.
4. The luminaires shall feature only LED emitters rated for nominal 30'000-hours LED life to L70 with estimated colour shift over lifetime less than 200 K.
5. The luminaire shall feature a minimum of three hours burn-In test during its manufacturing process.
6. The luminaire shall feature an adjustable flicker free frequency PWM from 600 to 25'000 Hz.

4. 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 the following beam angle: minimum beam angle, medium beam angle, maximum 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.

5. Photometric performance and Opticals

1. The luminaire shall meet the following minimum photometric performance requirements which should be supported by the photometric documentation:
   a) The luminaire shall have an output in excess of 960 lm with 70° optic.
   b) The luminaire shall have an output in excess of 1340 lm with 50° optic.
   c) The luminaire shall have an output in excess of 1'130 lm with 30° optic.
   d) The luminaire shall have an output in excess of 1'200 lm with 15° optic.

6. 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 120 W.
3. The luminaire shall feature a moulded IP rated main input connector.
4. The luminaire shall feature a moulded IP rated main through connector.
5. The luminaire shall feature a moulded IP rated for DMX input and DMX through.
6. The luminaire is designed to house an integrated wireles control, CRMX (Lumen Radio) and W-DMX (Wireless DMX).
7. The luminaire shall be equipped with a protective vent to reduce condensation in the sealed enclosure.
8. The luminaire shall be compatible with the USITT DMX-512A RDM protocol.
9. The luminaire shall support firmware upgrades using a dedicated UP-LOADER device using a 5 pin XLR connector.
10. The luminaire shall meet all requirements of the LVD (Low Voltage Directive) 2014/35EC and with the EMC (Electromagnetic Compatibility Directive) 2014/30/EU.

7. Environmental

1. The luminaire shall feature IP 66 rating and being suitable for outdoor installation; upon correct installation and periodic maintenances procedures.
2. The luminaire shall features a C2 minimum environment classification
3. The luminaire shall features a C5M environmental classification available on request.
4. The luminaire shall be capable of operating in ambient temperature range of -20°C (-4°F) to +45°C (113°F).
5. The luminaire shall be equipped with IP rated cooling fan.
6. Fan speed software shall permit the fixture to override DMX fan seed setting to prevent heat damage.
7. Thermal management shall include LED array circuit board temperature sensor.
8. Fixtures that do not provide the active thermal monitoring of LED board, shall not be acceptable.

8. 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, 1.33, 1.37-1, 1.37-2, 1.37-7.
3. Fixtures not offering RDM compatibility features access or temperature monitoring via RDM shall not be acceptable.
4. The luminaire shall be equipped with 3 push encoder user interface.
5. The luminaire shall offer 1 DMX control profiles, with a dedicate Control Channel, to set by DMX all additional functions.
6. The luminaire shall offer additional user definable options to including:

a) Dimmer curve setting.

b) LED frequency setting.

c) Loss of data behavieour options.

d) Fan mode setting.

8. The luminaire shall feature an on board 3 push rotary encoder for manually Stand alone operation.

9. 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.

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 width PWM modulation.

10. Accessories

The following accessories shall be included in fixture supplied:

1. BARE END to IP moulded Female Power connection cable.
2. XLR 5p to IP moulded Male/Female DMX connection cable.
3. 2 x Water effect wheels.
4. Magnetic gobo holder with manual indexing.
5. Magnetic colour filter holder.

The following accessories shall be available as an optional:

1. Pelican case for 1pc of the luminaires
2. Wall bracket.
3. Floor bracket.
4. Pole bracket.
5. 15°, 30°, 50°, 70° optimized lenses for gobo and effects.
6. Water effect gobo.
7. Fire effect gobo.
8. Aurora effect gobo.
9. 3 models of Sky cloud animation wheels.
10. Flame on animation wheel.
11. Glitter animation wheel.

12. Snoot.
13. Molded IP67 extension Power/DMX cable from 3mt to 20mt.
14. Software uploader UPBOX2P5.

Approved device shall be the PROLIGHTS MOSAICOFX100FC; no alternates or equals.