Tender Specifications

ASTRAHYB330

Moving hybrid beam-spot, 330W LED source
with zoom 3 – 50° and CMY

1. <u>General</u>

1. The luminaire shall be an high-power LED moving light, with DMX control of dimmer, colours, pan, tilt, pattern projection, focus, zoom and dual overlapping prisms wheels..

2. The luminaire shall be CE, UKCA, RCM, cTUVus, FCC 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 equipped with 330W high-power white LED source.

5. The luminaire shall not infringe any Intellectual Property unless licensed by the owner.

2. <u>Physical</u>

1. The luminaire shall be constructed of ABS plastics painted black outer covers, with internal aluminium and metal parts.

2. The luminaire shall feature an IP20 rate protection.

3. The luminaire dimensions shall be:

a) 638 mm (25.1") from base of the enclosure to the tip of the lens baffling.

b) 411 mm (16.2") across the exterior dimensions of the yoke.

c) The electronics enclosure shall be 375 mm (14.8") wide.

d) Head length 436 mm (17.2").

e) The luminaire shall weigh 21,6 kg (47.61 lbs).

f) The front lens diameter shall be 140 mm (5.5'') with HD anti-reflection achromatic coating.

4. The luminaire shall be able to be either truss-mounted or stand on a surface.

5. Fixture shall be suitable designed for operation over or under mounted on a truss perpendicular to the ground.

6. The following shall be provided:

a) The luminaire must include eighteen (11) static gobos.

b) The luminaire must include nine (8) interchangeable rotating gobos. Luminaires that have non-interchangeable gobo patterns shall not be deemed acceptable.

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c) Interchangeable rotating gobos shall have an outside diameter of 20 mm, image diameter of 16 mm, with a thickness up tp 3 mm.

d) The luminaire shall have 540 degrees of pan and 230 degrees of tilt. Pan and tilt must be controlled with 16 bit control and utilize absolute position encoder sensors to guarantee correct step position.

b.1) The luminaire shall have a pan speed of 3.0 s for 180 degree movement.

b.2) The fixture shall have a tilt speed of 2.0 s for 180 degree of movement.

b.3) Pan and tilt locks that stop at 0, 45, and 90 degrees for service and handling. Pan and tilt locks are not intended to be engaged during transport in pre-rigged truss.

e) 0 - 100% frost filter which delivers a soft edge beam look.

f) Automated linear focus lens system.

g) Automated linear zoom system from 3° to 50°.

h) A Color wheel containing 9 (nine) colour filters on 3 indipendent colours wheels.

i) Colour wheel shall include two CTO filter 2.400K and 3.200K and one CTB filter.

j) A subtractive linear CMY (cyan, magenta, yellow) on gradually fading colour wheels.

k) A circular 8 face prism and 6 linear prism with rotating systems must be able to index to any point on the 360° positioning of the prism.

  The two prisms shall be capable of being overlapped creating a multi-ray effect.

l) The luminaire must have handles in the base for luminaire handling and manipulation. Luminaires with no handles on the base shall not be acceptable.

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

n) Control/UI module shall have the option for battery power to allow fixture settings when the luminaire is not connected to the main.

3. 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 of 25°C 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 10 m, 20 m, 30 m 40 m, 50 m, 60 m, 70 m, 80 m, 90 m, 100 m, distance with the luminaire at the native optic.

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.

4. 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 a colour temperature of 7'000 K (+/- 125 K) at full on.

b) The luminaire shall have perform a beam angle from of 3,5° to 52°.

c) The luminaire shall have an output in excess of 114.701 lx (10.656 fcd) at 5m (16,4 ft) @ minimum zoom angle.

d) The luminaire shall have an output in excess of 1.882 lx (175 fcd) at 5m (16,4 ft)

@ maximum zoom angle.

e) The luminaire shall have an output in excess of 28.675 lx (2.664 fcd) at 10m (32.8 ft)

@ minimun zoom angle.

f) The luminaire shall have an output in excess of 471 lx (44 fcd) at 10m (32.8 ft)

g) @ maximum zoom angle.

h) The luminaire shall have an output in excess of 7.169 lx (666 fcd) at 20m (65,6 ft)

@ minimum zoom angle.

i) The luminaire shall have an output in excess of 118 lx (11 fcd) at 20m (65,6 ft)

@ maximum zoom angle.

2. The luminaire shall provide, but not limited to:

a) Sharp imaging on all gobo planes.

b) High-quality pattern imaging.

5. Electrical

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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 517W.

3. The luminaire shall feature a Neutrik® PowerCON True1 main input connector.

4. The luminaire shall feature an Amphenol 5 pin XLR connector for DMX input and DMX through.

5. The luminaire shall feature a Neutrik® RJ45 chassis mount for Art-Net input and Art-Net through.

6. The luminaire shall feature an on board LCD graphic display with autoflip.

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 or via USB pen drive.

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.

6. Environmental

1. The luminaire shall feature IP 20 rating.

2. The luminaire shall be capable of operating in ambient temperature range of -10°C (14°F) to + 45°C (113°F).

3. The luminaire shall be equipped with a combination of heat cooling system and low noise fan. Fixtures that do not provide the low noise fan cooling system, shall not be accettable.

a) Fan speed control via DMX channel shall be possible.

4. Fan speed software shall permit the fixture to override DMX fan speed setting to prevent heat damage.

5. Thermal management shall include LED array circuit board temperature sensors.

6. Users shall permit monitoring of temperature sensor via legible gaphic display.

7. Fixtures that do not provide the active thermal monitoring of LED board, shall not be acceptable.

7. Control And User Interface

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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. The luminaire shall offer the following control protocols: DMX & RDM (both wired and wireless), Art-Net, sACN.

4. The luminaire shall be compatible with both CRMX (Lumen Radio) and W-DMX (Wireless DMX).

5. Fixtures not offering RDM compatibility features access or temperature monitoring via RDM shall not be acceptable.

6. The luminaire shall be equipped with graphic LCD display for easy to read status reports and configurations changes.

7. The luminaire shall be equipped with five buttons user interface.

8. The luminaire shall be equipped with the USB input for firmware upgrade.

9. The internal software shall include the following features:

a) Home screen shall visualize at least the following informations:

   - luminaire addrees

   - Wdmx signal

   - user mode

   - temperature infos

   - diagnostic

   - selected protocol

   - lock screen

b) Diagnostics section with indication of possible parts damaged.

c) User selectable fixture XY home position settings.

d) LED status indicator setting on front panel.

e) DMX lost setting functions.

f) Transfer settings to fixture on the same signal line.

g) Calibration setting with individual focus and index calibration on each gobo.

h) Fixture info:

   - fixture and source hours

   - power cycles

   - maintenance cycles

   - power consuptions

   - firmware infos

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    - device infos

    - UID

i)   Wireless signal monitoring section.

10. The luminaire shall offer one (1) DMX user with 29 channels of control.

11. The luminaire shall offer additional user definable options to including:

a)   Loss of data behavior options.

b)   Display time out option.

8. Inizialization

1. The luminaire shall be fitted with high resolution absolute position encoders on the pan and tilt axes such that initialization on power up or reset can be accomplished with zero or minimal movement of these axis.

2. Luminaires not offering absolute position sensors on motors and that are required to move the pan and tilt axis home to fixed sensor positions or end stops in order to initialize, shall not be accettable.

3. The time to fully initialize the luminaire from power on or reset shall be no more than 36 seconds.

9. Accessories

The following accessories shall be included in fixture supplied:

1. 16 A 3G 2.5 mm Power cable with Neutrik PowerCON TRUE1 – Bare End.

2. 2 x Quick-Lock omega brackets.

The following accessories shall be available as an optional:

1. Flight Case for 3 pcs.

4. Up Box for firmware uploader UPBOX2P5.

Approved device shall be the PROLIGHTS ASTRAHYB330, no alternates or equals.

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