Tender Specifications

ASTRAPROFILE600IP

IP65 LED Moving Profile, with a
600W white source

1. General

1. The luminaire shall be an automated IP65 LED moving profile based on subtractive color generation, with DMX control of intensity, colours, pan, tilt, pattern projection, framing shutters and beam angle.
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 of a white LED source capable of delivering a variable white output from 2'700 K to 5’600 K through its linear CTO system.
5. The luminaire shall be capable of delivering an extensive range of saturated and pastel colours.
6. The luminaire shall feature an LED source with a rated power of 700 W.
7. The luminaire shall features an LED source made with a White CTC 6'500 K LED array.
8. The luminaire shall not infringe any Intellectual Property unless licenced by the owner.

2. Physical

1. The luminaire shall be constructed of sturdy die cast magnesium alloy outer covers, with internal aluminium and metal parts.
2. The luminaire shall feature an IP65 rate protection, with a fully sealed enclosure protecting the inside of luminaire from water, humidity, sand and smoke.
3. The luminaire dimensions shall be:

a) 742 mm (29,2”) from base of the enclosure to the tip of the lens baffling.

b) 454 mm (17,9”) across the exterior dimensions of the yoke.

c) The electronics enclosure shall be 441 mm (17,4”) wide.

d) Head length 530 mm (20,9”).

e) The luminaire shall weigh 45,6 kg (100,53 lbs).

f) The front lens diameter shall be 160 mm (6.29’’).

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 seven (7) interchangeable rotating gobos. Luminaires that have non-interchangeable gobo patterns shall not be deemed acceptable.

a.1) Interchangeable rotating gobos shall have an outside diameter of 29.9 mm, image diameter of 22 mm, up to 3 mm thickness.

a.2) Rotating gobo systems must be able to index to any point on the 360 positioning of the gobo.

b) The luminaire shall have 540 degrees of pan and 270 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 3.26 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.

c) A twenty (20) leaf iris which reduces the projection area by 95%.

d) A dual linear 0 – 100% frost filter.

e) Automated linear zoom system from 7° to 62° and focus lens system.

f) Rotating fixed pattern wheel shall allow for animation in two directions and shall contain an unique and continuous breakup patterns.

g) A Color wheel containing 6 (six) color filters.

h) A subtractive linear CMY (cyan, magenta, yellow).

i) An automated motorized shutter system composed by 4 individually controllable shutter blades, working on 4 layers and each being able to cut through the entire projection, each shall allow a +/- 30° rotation, and the entire system shall be able to perform a self rotation of +/- 45°.

j) A circular 4 face prism with rotating systems must be able to index to any point on the 360° positioning of the prism.

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

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

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

3. LED Emitters

1. The luminaire shall feature an LED source module manufactured and customized for Prolights, with a total Rated power of 700 Watt, and total Driven power of 600 Watt.
2. The luminaire shall feature a 5’600k LED source.
3. The luminaire shall feature an LED source consisting only of LED emitters from a known production batch and bin.
4. The luminaires shall feature only LED emitters rated for nominal 30’000-hours LED life to L70 with estimated white presets shift over lifetime less than 200 K.
5. The luminaire shall feature a minimum of 3 hours burn-In test during its manufacturing process.
6. The luminaire shall features adjustable PWM frequency from 600 to 50'000 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 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 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 a colour temperature of 6'500 K (+/- 125 K) with LEDs at full on.

b) The luminaire shall have a CRI in excess of 70 Ra when set at full on.

c) The luminaire shall have on-board CRI enhancement filter to obtain a CRI in excess of 90 Ra.

d) The luminaire shall have an output in excess of 21'000 lm when set at full on.

2. The luminaire shall have a colour temperature within 100 K of the target colour temperature when using the 5’600K High CRI filter.

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

a) Low gate and beam temperatures.

b) Sharp imaging on all gobo planes, framing shutters planes and iris planes.

c) 7° through 62° degree field angle.

d) High-quality pattern imaging.

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 800 W.
3. The luminaire shall feature a Seetronic® 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 Seetronic RJ45 chassis mount for Art-Net input and Art-Net through
6. The luminaire shall feature a built in Wireless DMX receiver.
7. The luminaire shall feature an on board OLED graphic display.
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 65 rating.
2. The luminaire shall be capable of operating in ambient temperature range of -20°C (-4°F) to + 45°C (113°F).
3. The luminaire shall be equipped with a cooling fan.

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

4. Fan speed software shall permit the fixture to override DMX fan seed setting to prevent heat damage.
5. Thermal management shall include LED module temperature sensor.
6. Users shall permit monitoring of temperature sensor via legible black OLED multi-line display.
7. 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 standard.
3. Fixtures 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 be equipped with five buttons user interface.
6. The luminaire shall offer a control through DMX512, RDM, ArtNet, sACN, WDMX + CRMX.
7. The luminaire shall offer 3 DMX control profiles; 29, 39, 54 channels.

a) Standard DMX control profile shall have 39 channels control.

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

a) Dedicated channel for fan control, multiple presets effects, when set in Extended DMX control profile.

b) Display time out option.

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 guarantee flicker free 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. 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 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 acceptable.
3. The time to fully initialize the luminaire from power on or reset shall be no more than 46 seconds.

11. Accessories

The following accessories shall be included in fixture supplied:

1. 16 A 3G 2.5 mm power cable (BARE END – SEETRONIC IP65 POWER CONNECTOR)
2. 2 x Quick-Lock omega brackets.

The following accessories shall be available as an optional:

1. Flight Case for 2 pcs.
2. Slim aluminium clamp.
4. Up Box for firmware uploader.

Approved device shall be the PROLIGHTS ASTRAPROFILE 600 IP, no alternates or equals.