

Tender Specifications



Astra Blade100IP

IP65 motorized linear batten with 16x40W RGB+WW LEDs with two variable white pixel linear LED strips on both sides and zoom 4°-40°



1. <u>General</u>

- 1. The luminaire shall an IP65 rated, linear motorized LED batten, featuring high output, DMX control of intensity, colours, tilt, zoom and and two variable white pixel linear LED strips on both sides.
- 2. The luminaire shall be CE, RCM.
- 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 extensive range of saturated and pastel colours and white preset output from 2'800 K to 10'000 K.
- 5. The luminaire shall be equipped with 16x40W RGBW LED.
- 6. The luminaire shall features an LED source containing 16 pcs LED emitters, each with four (4) colours being R, G, B, W (warm white), and 32 individual sections (16 sections on the top + 16 sections on the bottom) VW linear LED strips.
- 7. The luminaire shall not infringe any Intellectual Property unless licensed by the owner.

2. Physical

- 1. The luminaire shall be weatherproof (IP65) and constructed from durable die cast magnesium alloy, finished in black.
- 2. The luminaire shall feature a secure locking mechanism for the tilt axis.
- 3. The hard light luminaire shall have the dimensions not exceeding 996 mm (39.21") in length, 336 mm (13.23") in height, and 175 mm (6.89") in width.
- 4. The luminaire shall weigh no more than 27,4 kg (60.41 lbs).
- 5. The luminaire shall be able to be either truss-mounted or stand on a surface.
- 6. The following shall be provided:
 - a The luminaire shall have 200 degrees of tilt. Tilt must be controlled with 16 bit control and utilize position encoder sensors to guarantee correct step position.
 - a.1) Tilt must be controlled with 8 and 16 bit control and utilize position encoder sensors to guarantee correct step position.
 - a.2) Tilt should be automatically repositioned after an accidental movement.
 - b Automated linear zoom system from 4° to 40°.



- c The luminaire must have handles in the base for luminaire handling and manipulation. Luminaires with no handles on the base shall not be acceptable.
- d The luminaire shall feature integral power and electronics on board of the fixture.
- e The luminaire shall feature an active cooling system with multiple fan modes.

3. LED Emitters

- 1. The luminaire shall feature an source containing 16 pcs Osram Ostar LED emitters, each with four (4) colours being R, G, B, W (warm white), and 32 individual sections (16 sections on the top + 16 sections on the bottom) VW linear LED strips.
- 2. The luminaire shall feature an LED source consisting only of LED emitters from a known production batch and bin.
- 3. The luminaires shall feature only LED emitters rated for nominal 50'000-hours LED life.
- 4. The luminaire shall feature a minimum of 3 hours burn-In test during its manufacturing process.
- 5. The luminaire shall feature adjustable PWM frequency from 1'000 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 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 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 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.

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5. <u>Photometric performance and Optical</u>

- 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 12.028 lm @ Full On minimum zoom angle and Strips on.
 - b) The luminaire shall have an output in excess of 15.262 Im @ Full On maximum zoom angle and Strips on.
 - c) The luminaire shall have an output in excess of 50.695 lx (4.711 fcd) at 5m (16,4 ft) @ Full On minimum zoom angle and Strips on.
 - d) The luminaire shall have an output in excess of 3'056 lx (284 fcd) at 5m (16,4 ft) @ Full On maximum zoom angle and Strips on.
 - e) The luminaire shall have an output in excess of 7.470 lm @ Full On minimum zoom angle (only wash LEDs).
 - f) The luminaire shall have an output in excess of 12.070 lm @ Full On maximum zoom angle (only wash LEDs).
 - g) The luminaire shall have an output in excess of 49.415 lx (4.592 fcd) at 5m (16,4 ft)
 @ Full On minimum zoom angle (only wash LEDs).
 - h) The luminaire shall have an output in excess of 2.782 lx (258 fcd) at 5m (16,4 ft) @ Full On maximum zoom angle (only wash LEDs).

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.
- 2. The luminaire shall feature a nominal max power consumption of 750W and 1'000W peak in strobe mode
- 3. The luminaire shall feature a Seetronic IP65 PowerCON True1 main in/out connector.
- 4. The luminaire shall feature Seetronic IP65 XLR 5p connector for DMX input and DMX through.
- 5. The luminaire shall feature an RJ45 chassis mount for Art-Net input and Art-Net through.
- 6. The luminaire shall feature an on board OLED 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.
- 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.

7. Environmental

- 1. The luminaire shall feature IP65 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 combination of heat cooling system and fan cooling system.
 - 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 graphic 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. The luminaire shall offer the following control protocols: DMX512, RDM, ArtNet, sACN, WDMX + CRMX.
- 4. Fixtures not offering RDM compatibility features access or temperature monitoring via RDM shall not be acceptable.
- 5. The luminaire shall be equipped with multi-line OLED display for easy to read status reports and configurations changes.
- 6. The luminaire shall be equipped with five buttons user interface.
- 7. The internal software shall include the following features:



- a) Home screen shall visualize at least the following information:
 - luminaire address
 - Wdmx signal
 - user mode
 - temperature info
 - diagnostic
 - selected protocol
 - lock screen
- b) Diagnostics section with indication of possible parts damaged.
- c) DMX lost setting functions.
- d) Transfer settings to fixture on the same signal line.
- e) Fixture info:
 - fixture and source hours
 - power cycles
 - maintenance cycles
 - power consumption
 - firmware info
 - device info
 - UID
- f) Wireless signal monitoring section.
- 8. The luminaire shall offer pixel control.
- 9. The luminaire shall offer additional user definable options to including:
 - a) Dedicated channel for control option (Fan, LED frequency, Dimmer Speed, Reset).
 - 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 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. <u>Initialization</u>

- 1. The luminaire shall be fitted with high resolution absolute position encoders on 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 tilt axis home to fixed sensor positions or end stops in order to initialize, shall not be acceptable.

11. Accessories

The following accessories shall be included in the fixture supplied:

- 1. 1,5 meters 3G1,5mmq power cable (BARE END SEETRONIC POWERCON TRUE1 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. Heavy-load aluminium clamp.
- 3. Firmware uploader UPBOX2P5 and UPBOXPRO

Approved device shall be the PROLIGHTS ASTRABLADE100IP, no alternates or equals.