SHOWLINE SL BEAM 100 LED LUMINAIRE SPECIFICATIONS.

GENERAL.

A.) Overview.

1.) The luminaire shall be a motorized colour mixing luminaire employing seven (7) homogenized red, green, blue, and white LED engines. The LED engines shall be capable of providing colour matched presets as well as millions of permutations of colour.

2.) The luminaire shall conform to UL 1573 stage and studio use as well as UL 8750 LED standards and tested via ETL to conform to the aforementioned UL specifications. The luminaire shall hold ETL, cETL and CE, C-Tick markings.

3.) The luminaire shall conform to USITT DMX-512A(RDM) protocol standards.

4.) The luminaire shall employ seven (7) LED light source engines that will not emit light in the ultra-violet (wavelengths less than 400nm for UV-A,B, or C) or the Infrared spectrum (wavelengths of more than 775 nm). Units that emit light within this spectrum shall not be accepted.

5.) The luminaire shall have an integrated control system that provides local controls offering access to set up parameters, preset colours, stored custom presets and chases, and status reporting.

6.) The luminaire shall be a motorized wash with a variable motorized five (5) to forty-five (45) degree homogenized output.

7.) The luminaire shall have an output of up to 1500 lumens (RGBW)

8.) The luminaire shall have control inputs for:

   a. DMX512 with input/output connectivity via a 5 Pin DMX connector

   b. RDM with input/output connectivity via a 5 Pin DMX connector

   c. DMX512 with input/output connectivity over Ethernet via a RJ45 connector

9.) All control and power input and output sockets shall be located on the opposite side of the control panel to aid in cable management.

10.) All LED luminaires shall be provided by a single manufacturer to ensure over all compatibility.

B.) Physical

1.) The construction of the unit shall be sheet metal with molded engineering grade plastic in a matt black finish.

2.) The luminaire shall be of compact dimensions, not exceeding 9 inches [229 mm] in length, 15.6 inches [397 mm] in height and 8.3 inches [210 mm] in width.

3.) The luminaire shall weigh no more than 16.7 lbs. [7.6 kg].

4.) The luminaire shall provide mounting capabilities from a pair of quick connect brackets to which approved mounting devices can be attached. It shall be possible to remove the quick connect brackets without the use of tools. The luminaire shall have four feet constructed from rubber for floor mounting.

5.) Safety cable attachment points shall be located on both ends of the luminaire.

E.) Mechanical Data.

1.) Variable fans shall be used to provide forced-air cooling for internal components. In addition, the fans shall be capable of being disabled where the unit shall regulate intensity without utilizing the fans.

2.) A full color LCD menu system shall provide essential system information and operational controls. The LCD display shall automatically orient the display according to the orientation of the unit, thus ensuring the menu is readable in various configurations.

3.) The finish shall be matt black.

4.) The luminaire shall be supplied with a limited two-year warranty when used in normal applications.

5.) The luminaire shall have a motorized pan and tilt system comprising a pair of two phase stepper motors. The luminaire shall have a pan range of 540 degrees, a tilt range of 230 degrees, and 0.014 degree resolution per step.

6.) The luminaire shall have a motorized focus system .The beam angle range shall be from five (5) to forty-five (45) degrees.

C.) Electrical.

1.) Supply Voltage shall be 120 to 240V, 50/60Hz. (+/- 10% auto-ranging)

2.) The luminaire current draw shall not exceed 150 watts with all RGBW engines at full output and shall not exceed 150 watts in any of the preset color settings; luminaires that do not meet these criteria shall not be accepted.

3.) The light source shall consist of seven (7) fifteen (15) watt RGBW LED engines. It shall be possible to control the RGBW LED engines in a single group, or in three separate zones.

4.) The luminaire shall be ETL and cETL listed , CE and C-Tick marked.

D.) Environmental.

1.) Maximum operating ambient temperature shall not exceed 104 degrees Fahrenheit (40 degrees Celsius)

2.) A variable speed cooling system shall be employed to maintain the optimal operating temperature of the luminaire.

3.) Luminaires shall be low maintenance and environmentally friendly, all units shall be mercury free.

E.) Operation.

1.) The luminaire shall have control inputs for:

a. DMX512 with input/output via a DMX 5 Pin Male and Female connector

b. RDM with input/output via a DMX 5 Pin Male and Female connector

c. DMX512 with input/output connectivity over Ethernet via a RJ45 connector

Luminaires utilizing proprietary only controls shall not be accepted.

2.) DMX512 control will be via Simple 8-Bit, HSIC, RGBW 8-Bit ,or RGBW 16-Bit mode. Each control type can be further broken into LED groupings of 1, or 3.

3.) Control parameters for each DMX512 mode shall be as follows (1 group mode):

a. Simple 8-Bit Mode (10 Channel)
    a. Pan High
    b. Tilt High
    c. Master Intensity
    d. Strobe
    e. Zoom
    f. Control
    g. Red
    h. Green
    i. Blue
    j. White

b. HSIC Mode (18 Channel)
    a. Pan-High
    b. Pan-Low
    c. Tilt-High
    d. Tilt-Low
    e. Master Intensity
    f. Strobe
    g. Duration
    h. Zoom
    i. Rotate Mode
    j. Position/Speed
    k. Focus Timing
    l. Timing

m. Control
n. Hue-High
o. Hue-Low
p. Saturation
q. Intensity
r. CCT

c. RGBW 8-Bit Mode (14 Channel)
    a. Pan – High
    b. Tilt – High
    c. Master Intensity
    d. Colour Presets
    e. Strobe
    f. Duration
    g. Zoom
    h. Focus Timing
    i. Timing
    j. Control
    k. Red
    l. Green
    m. Blue
    n. White

d. RGBW 16-Bit Mode (23 Channel)
    a. Pan – High
    b. Pan - Low
    c. Tilt - High
    d. Tilt - Low
    e. Master Intensity - High
    f. Master Intensity - Low
    g. Colour Presets
    h. Strobe
    i. Duration
    j. Zoom
    k. Focus Timing
    l. Intensity Timing
    m. Colour Timing
    n. Zoom Timing
    o. Control
    p. Red – High
    q. Red – Low
    r. Green – High
    s. Green – Low
    t. Blue – High
    u. Blue – Low
    v. White-High
    w. White-Low

e. Luminaire addressing shall be setup via three different methods:

   i. Instant set up - from the control display on the luminaire utilize the shortcut key and navigation arrows for quick DMX 512 addressing.
   ii. From the control menu – under Settings/DMX– set up the DMX address using the navigation arrows to set DMX 512 mode, LED grouping, and address.
   iii. RDM – using any RDM controller, the DMX address shall be assignable via standard RDM commands.

4.) The luminaire shall include an onboard LCD display and controls of the following:

a. Menu settings:
   i. Presets (standard and user defined)
   ii. Colour Filters
   iii. Effects (Chases – preloaded and user defined)
   iv. Strobe / Timing
   v. Settings (configuration options)
   vi. Fixture Lockout (to prevent changes)
   vii. Password Setting
   viii. Current Fixture Operational Status

5.) Security settings shall be employed on a four (4) level access. Each level shall allow access to additional features and settings. Configuration settings, power up presets, hour reset, and password settings may be set under full access control. Security settings shall follow a four level access and noted as the following:
   a.) Level 0 System is unlocked
   b.) Level 1 Editing and saving presets and settings are locked
   c.) Level 2 Settings menu is locked
   d.) Level 3 All settings available are locked

Luminaires not utilizing this type of technology or any security settings shall not be accepted.

6.) Access to on board presets shall be from the control panel of the luminaire and DMX. Each user definable preset shall store RGBW and intensity settings for each of the thirty-one (31) presets. All or discrete LED pixels shall be selectable for editing. Presets shall be storable in the fixture firmware.

7.) Access to eighteen (18) on board chases shall be from the control panel of the luminaire and DMX. Each chase shall playback RGBW and intensity settings for each step of the eighteen (18) presets. All or discrete LED pixels shall be selectable for editing. Ten (10) built-in and eight (8) user adjustable presets shall be storable in the fixture firmware.

a. A chase editor shall allow quick creation of colour and movement chases. A graphical interface shall display a representation of the pan and tilt position for every part of the chase.

8.) The luminaire shall provide temperature monitoring technology. This technology employs provides the operating temperature for the luminaire as well as high and low records.

a. The current and past temperatures shall be readable in the menu system under Status.

b. The luminaire shall be capable of having its fans disabled via the menu system or DMX where the unit shall regulate luminaire intensity in relation to temperature without utilizing the fans.

Luminaires not utilizing temperature monitoring technology and luminaire status will not be accepted.

The unit shall include a colour calibration system, ensuring that each LED engine can replicate colours within a pre-defined colour space.

This colour space shall match all Showline products and shall also include pre-defined preset colours.

The colour calibration shall be set at the factory and shall be capable of being enabled or disabled via the menu, DMX, and RDM.

Luminaires not utilizing colour calibration technology will not be accepted.

The luminaire shall include seven (7) RGBW LED engines for full-range colour mixing and delivering full field dimming - allowing for both smooth timed fades and fast blackouts. The LED engines shall operate in various groupings allowing up to three (3) individually controlled LED zones. The LED engines shall operate as a strobe system capable of various strobe effects from both rate and duration control channels.

c. The LEDs used in the luminaire shall be high brightness and proven quality from established and reputable LED manufacturers.

b. The Osram Ostar 15W 3+1 LED emitters used in the luminaire shall be rated for a nominal 50,000-hour LED life to 70% intensity.

c. The luminaire (100% of each lot) shall undergo a minimum seventy-two (72) hour burn-in test during manufacturing.

F). DIMMING.

1.) The luminaire, in 16-bit mode, shall use 16-bit nonlinear scaling techniques for high-resolution dimming.

   a. Dimming curves shall be selectable via the luminaire menu, DMX and RDM for various methods of smooth dimming over long timed fades.

   b. The luminaire shall be digitally driven using high-speed pulse width modulations (PWM) in concert with power factor control (PFC) to ensure a smooth flicker free dimming curve from 100 to 0 % and shall be imperceptible to video cameras and video related devices.

END OF SPECIFICATION.