SHOWLINE SL ePAR 180 LUMINAIRE SPECIFICATIONS.

GENERAL.

A.) Overview.

1.) The luminaire shall be a color mixing luminaire employing nineteen (19) homogenized red, green, blue, and white LED engines. The luminaire shall be capable of providing color matched presets as well as millions of permutations of color.

2.) The luminaire shall hold CE and C-Tick markings.

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

4.) The luminaire shall employ nineteen (19) 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 colors, stored custom presets and chases, and status reporting.

6.) The luminaire shall be a PAR type wash luminaire with a twenty-one (21) degree beam angle.

7.) The luminaire shall have an output of up to 4400 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

9.) All control and Power input and output shall be located on opposite side of the luminaire lenses.

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

B.) Physical

1.) The construction of the luminaire shall be aluminium die casting in a matt black finish.

2.) The luminaire shall be of compact dimensions, not exceeding 9 1/4 inches [235 mm] in length, 12 1/4 inches [311 mm] in height and 12 inches [302 mm] in width.

3.) The luminaire shall weigh no more than 10 lbs. [4.5 kg].

4.) The luminaire shall provide mounting capabilities from an included split yoke to which approved mounting devices can be attached. The yoke shall also operate as a floor stand.

5.) A locking accessory frame slot shall include dual channels for accessories.

a. A spring-loaded locking mechanism shall prevent accessories from falling from the luminaire.

C.) 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 luminaire shall regulate intensity without utilizing the fans.

2.) A LCD menu system shall provide essential system information and operational controls.

3.) The finish shall be high temperature stoved black paint on the metal components.

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

D.) Electrical.

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

2.) The luminaire current draw shall not exceed 180 watts with all RGBW engines at full output and shall not exceed 180 watts in any of the preset color settings; luminaires that do not meet these criteria shall not be accepted.

3.) The light engine source shall consist of nineteen (19) RGBW LED engines used in conjunction with nineteen (19) lens systems. Each LED engine shall consist of individually addressable Red, Green, Blue and Daylight White channels.

4.) The luminaire shall be C-Tick and CE marked.

E.) 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.

F.) 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. 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. Control parameters for each DMX512 mode shall be as follows:

a. HSIC Mode (10 Channel)
    a. Intensity
    b. Strobe
    c. Duration
    d. Timing
    e. Control
    f. Hue - High
    g. Hue - Low
    h. Saturation
    i. Intensity
    j. Color Temperature

b. RGBW 8-Bit Mode (10 Channel)
    a. Intensity
    b. Color Presets
    c. Strobe
    d. Duration
    e. Timing
    f. Control
    g. Red
    h. Green
    i. Blue
    j. White

c. RGBW 16-Bit Mode (16 Channel)
    a. Intensity – High
    b. Intensity - Low
    c. Color Presets
    d. Strobe
    e. Duration
    f. Intensity Timing
    g. Color Timing
    h. Control
    i. Red – High
    j. Red - Low
    k. Green – High
    l. Green - Low
    m. Blue – High
    n. Blue – High
    o. White - High
    p. White - Low

d. Luminaire addressing shall be setup via two different methods:

i. 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.
ii. RDM – using any RDM controller, the DMX address shall be assignable via standard RDM commands.

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

a. Menu settings:
i. Presets (standard and user defined)
ii. Color Filters
iii. Effects (Chases – preloaded and user defined)
iv. Strobe / Timing
v. Settings (configuration options)
vi. Current Fixture Operational Status

4.) 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. Presets shall be storable in the fixture firmware.

5.) 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. Ten (10) built-in and eight (8) user adjustable presets shall be storable in the fixture firmware.

6.) 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, DMX and RDM where the luminaire shall regulate output intensity in relation to temperature without utilizing the fans.

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

7.) The unit shall include a color calibration system, ensuring that each luminaire can replicate colors within a pre-defined color space.

a. This color space shall match all Showline products and shall also include pre-defined preset colors.

b. The color 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 color calibration technology will not be accepted.

8.) The luminaire shall include nineteen (19) RGBW LED engines for full-range color mixing and delivering full field dimming - allowing for both smooth timed fades and fast blackouts. The LED engines shall operate as a strobe system capable of various strobe effects from both rate and duration control channels.

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

b. The LED emitters used in the luminaire shall be rated for a nominal 50,000-hour LED life to 70% intensity.

c. All LED fixtures (100% of each lot) shall undergo a minimum seventy-two (72) burn-in test during manufacturing.

G). 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.