

## SHOWLINE SL PAR 155 LED LUMINAIRE SPECIFICATIONS.

### GENERAL.

#### A.) Overview.

- 1.) The luminaire shall be a color mixing luminaire employing nine (9) homogenized red, green, blue, and white LED engines. The LED engines shall be capable of providing color matched presets as well as millions of permutations of color.
- 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 nineteen (9) 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 wash luminaire with a variable eight (8) to forty (40) degree homogenized output.
- 7.) The luminaire shall have an output of up to 3200 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 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 die cast aluminum with molded engineering grade plastic in a matt black finish.
- 2.) The luminaire shall be of compact dimensions, not exceeding 13 inches [318 mm] in length, 17.6 inches [414 mm] in height and 11 inches [275 mm] in width.
- 3.) The luminaire shall weigh no more than 17.6 lbs. [8 kg].

4.) The luminaire shall provide a split yoke design consisting of a primary outer yoke and a secondary inner yoke. It shall be possible to mount the luminaire on a floor without an additional floor stand accessory.

5.) A Safety cable attachment point shall be located on the top of of the luminaire.

#### E.) Mechanical Data.

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

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 manual pan and tilt system comprising a yoke and plastic tilt knob.

6.) The luminaire shall have a manual zoom system with two (2) focus knobs located on the side of the luminaire. The beam angle range shall be from eight (8) to forty (40) degrees.

7.) The luminaire shall have an optional barndoor accessory available for beam masking control.

#### 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 nine (9) fifteen (15) watt RGBW LED engines.

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. 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.
- 3.)
  - a. Simple 8-Bit Mode (6 Channel)
    - a. Master Intensity
    - b. Strobe
    - c. Red
    - d. Green
    - e. Blue
    - f. White
  - b. HSIC Mode (10 Channel)
    - a. Master Intensity
    - b. Strobe
    - c. Duration
    - d. Timing
    - e. Control
    - f. Hue-High
    - g. Hue-Low
    - h. Saturation
    - i. Intensity
    - j. CCT
  - c. RGBW 8-Bit Mode (10 Channel)
    - a. Master Intensity
    - b. color Presets
    - c. Strobe
    - d. Duration
    - e. Zoom
    - f. Timing
    - g. Control
    - h. Red
    - i. Green
    - j. Blue
    - k. White

- d. RGBW 16-Bit Mode (16 Channel)
  - a. Master Intensity - High
  - b. Master Intensity - Low
  - c. Color Presets
  - d. Strobe
  - e. Duration
  - f. Intensity Timing
  - g. Colour Timing
  - h. Control
  - i. Red – High
  - j. Red – Low
  - k. Green – High
  - l. Green – Low
  - m. Blue – High
  - n. Blue – Low
  - o. White-High
  - p. 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. Color 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. 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. Ten (10) built-in and eight (8) user adjustable presets shall be storable in the fixture firmware.
- 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 fan 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.

- 9.) The unit shall include a color calibration system, ensuring that each LED engine 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.

- 10.) The luminaire shall include nine (9) 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 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.**