



S120-C

LED Soft Light

L I G H T I N G - P R O D U C T S P E C I F I C A T I O N

V1.0

A. General

1. The luminaire shall be a RGBW LED soft light luminaire with an electronically controlled LED light source especially with the ability to change the diffusion panel as needed.
2. The luminaire shall be capable of providing fully tunable white light from 2800 to 10,000K and allow precise manipulation of intensity, green-magenta point (full minusgreen and full plusgreen), hue and saturation, and digital gel color selection.
3. The precise continuous manipulation of intensity from 0% to 100% is mandatory.
4. All functions shall be controllable through USITT DMX 512A and fully RDM compatible and equipped with a feedback channel for reporting.
5. An on-board control shall be available to control intensity, color temperature, green-magenta point, hue and saturation, and gel selection.
6. The luminaire shall be available as a manual, hanging pole operated, and center mount versions.

B. Physical

1. The luminaire shall be constructed of rugged, aluminum and molded engineering grade fiber-reinforced thermoplastics.
2. The body of the fixture shall be available in blue/silver or matt black finish.
3. Technical requirements for the soft light luminaire:
 - a. The soft light luminaire shall have the dimensions not exceeding 1467 mm (57.7") in length, 473 mm (18.6") in height without spigot, 588 mm (23.1") with spigot, and 133 mm (5.2") in width.
 - b. Light aperture shall have a dimension of 1290 mm (50.8") by 300 mm (11.8") with a sturdy accessory, barndoor and diffusion slot including a top latch to allow for additional accessories.
 - c. The stirrup shall be made of aluminum profile with a 28 mm (1 1/8") spigot.
 - d. High strength tilt lock shall guaranty secure locking to eliminate any movement or slippage to ensure the luminaire will stay in position.
 - e. Top plastic handle for carrying of lamphead and plastic foot for allowing the fixture to stand on a flat surface.
 - f. A tilt range of +/- 90° is required.
 - g. The beam angle shall range from 110 – 115° with the changing of diffusion panels.
 - h. Weight for the manual version shall be 16 kg (35.3 lb.) and for the pole operated version 19.6 kg (43.2 lb.) and for the center mount version 13.7 kg (30.2 lb.).
4. The luminaire shall be equipped with cooling fans.
5. The fan noise emission shall not exceed 20 dBA (1m) at any time.
6. The LED emitters used in the fixture should be rated for nominal 50,000-hour LED life to 70% intensity with an estimated color shift over lifetime less than 200 K.
7. The luminaire shall provide monitoring of the hours in use and the actual temperature.

C. Electrical

1. The luminaire shall be furnished with an external power supply for 110 to 250 V AC 50/60Hz supply voltage.
2. The luminaire shall require power from a non-dim source.
3. The nominal power consumption shall be 400 W and shall not exceed 430 W at full output.
4. Available power cord options shall include but not be limited to:
 - a. powerCon TRUE1 cable with bare ends
 - b. powerCon TRUE1 cable and Edison connector
 - c. powerCon TRUE1 cable and Schuko connector
 - d. powerCon TRUE1 cable and Chinese connector
 - e. powerCon TRUE1 cable and Japanese connector

5. Only integrated light engines that will not emit light in the ultra-violet or the Infrared spectrum are acceptable.
6. A control and indicator panel for on-board control shall be available.
7. The fixture shall be equipped with an RDM/DMX interface.
8. An XLR 5-pin DMX in and XLR 5-pin DMX through shall be implemented.
9. A EtherCon LAN port shall be implemented.
10. An XLR 4-Pin port shall be implemented for battery power input in the range of 23 – 36 V DC.
11. An XLR 3-Pin port shall be implemented for 48 V DC power input from the SkyPanel PSU.
12. The fixture shall have a USB-A port used for updating the fixture's internal firmware, adjusting operating parameters, for service purposes, and for powering external devices.

D. Optical

1. The optical system shall offer an interchangeable diffusion panel with a half peak angle in the range of 110 – 115°. The luminaire should have soft, even beam of light and clean shadow rendition with following optical characteristics:
 - a. Aperture Dimension of 1290 mm x 300 mm (50.8" x 11.8")
 - b. Color rendition index CRI of > 95, TLCI of > 90
 - c. Continuously variable correlated color temperature range from 2,800 K – 10,000 K
 - d. Continuously variable green-magenta adjustment
 - e. Full RGBW color gamut with hue and saturation control
 - f. Digital gel color selection
 - g. Color temperature tolerance of +/- 100 K (nominal), +/- 1/8 Green-Magenta (nominal)
2. The manufacturer shall ensure that there will be no differences in the quality of the light field between production batches of the lighting fixtures.
3. Fixture should have the following photometric characteristics:

| | 3 m / 9.8ft | | 5 m / 16.4 ft | | 7 m / 23.0 ft | | 9 m / 29.5 ft | |
|---------------------------|-------------|---------|---------------|--------|---------------|--------|---------------|--------|
| | 3200K | 5600K | 3200K | 5600K | 3200K | 5600K | 3200K | 5600K |
| Standard Diffusion | 1356 lx | 1244 lx | 488 lx | 448 lx | 249 lx | 229 lx | 151 lx | 138 lx |
| | 126 fc | 116 fc | 45 fc | 42 fc | 23 fc | 21 fc | 14 fc | 13 fc |
| Lite Diffusion | 1433 lx | 1311 lx | 516 lx | 472 lx | 263 lx | 241 lx | 159 lx | 146 lx |
| | 133 fc | 122 fc | 48 fc | 44 fc | 24 fc | 22 fc | 15 fc | 14 fc |
| Heavy Diffusion | 1111 lx | 1022 lx | 400 lx | 368 lx | 204 lx | 188 lx | 123 lx | 114 lx |
| | 103 fc | 95 fc | 37 fc | 34 fc | 19 fc | 17 fc | 11 fc | 11 fc |
| Intensifier | 2133 lx | 1944 lx | 768 lx | 700 lx | 392 lx | 357 lx | 237 lx | 216 lx |
| | 198 fc | 181 fc | 71 fc | 65 fc | 36 fc | 33 fc | 22 fc | 20 fc |

E. Environmental

1. The fixture shall be rated IP 20 for dry location use
2. The fixture shall operate in an ambient temperature range of -20°C (-4°F) to 45°C (113°F)
3. The fixture shall be in compliance with CE standards as well as ENEC and FCC certified
4. The fixture shall be UL LISTED, or equivalent certification, to the UL1573 standard for stage and studio use.

F. Operation

1. It shall be possible to remote control the luminaire via DMX 512 A.
2. The fixture shall be fully RDM compatible and equipped with a feedback channel for reporting.
3. The fixture shall be fully Art-Net 3 enabled with DMX gateway capability
4. An onboard control with dot-matrix display for intensity control and to access the menu shall be available.
5. Special modes of operation should be available including, but not limited to:
 - a. Tungsten Mode: Mimics the behavior of a conventional Tungsten light source
 - b. Low End Dimming Mode: Provides lower light levels with enhanced CCT accuracy and color rendition
 - c. Dimming Curve Selection: Selection of four dimming curves including exponential, linear, logarithmic, and "S" curve
 - d. Master/Slave Mode: Allows for one fixture to control a group of several other ARRI fixtures
 - e. Lighting Effects: A "Party Effect" that scrolls through hue and saturation
6. Other functions and setting of the lamphead should include:
 - a. Display Setup: Allows for control of the display illumination, brightness, contrast, Orientation, and error display setting
 - b. USB Functions: Allows for the saving of presets, fixture settings and error logs to an external USB stick
 - c. Low Battery Warning: Allows user to set a voltage whereby the lamphead will display a warning if a battery voltage should fall below
 - d. DMX Settings: Allows for the adjustment of DMX address, protocol, signal loss behavior, and protocol version
 - e. Art-Net Settings: Allows for the adjustment of Art-Net net, subnet, universe, merge mode, state, and gateway
 - f. IP Settings: Allows for the adjustment of the IP Mode and IP Address with the onboard control panel
7. The luminaire shall offer seven 8 bit DMX profiles, seven 16 bit DMX profiles, and five coarse/fine DMX profiles, which can be pre-configured by the user.
8. The 8 bit profiles should include but not be limited to following operating mode:
 - a. CCT & RGBW mode shall require not more than 12 DMX channels and provide control over intensity, color temperature, +/- green, and individual red, green, blue, and white color channels, plus white-color cross fade, and fan control
 - b. CCT mode shall require not more than 7 DMX channels and provide control over intensity, color temperature, and +/- green, and fan control
 - c. CCT & HSI mode shall use not more than 10 DMX channels and provide control over intensity, color temperature, +/- green, color hue, color saturation, and white-color crossfade, and fan control
 - d. RGBW mode shall use not more than 9 DMX channels and provide control over intensity and individual red, green, blue, and white color channels, and fan control
 - e. HSI mode shall use not more than 7 DMX channels and provide control over color hue, color saturation and intensity, and fan control
 - f. Gel mode shall use not more than 17 channels and provide control over intensity, CCT selection, color matching selection, brand selection, gel category selection, and gel color selections for two different gels, gel one to gel two cross fade, transition type, and fan control
 - g. x, y Coordinate mode shall use not more than 11 channels and provide control over intensity, x1 and y1 coordinates, x2 and y2 coordinates, xy1 to xy2 cross fade, transition type, and fan control

9. The 16 bit profiles should include but not be limited to following operating mode:
 - a. CCT & RGBW mode shall require not more than 20 DMX channels and provide control over intensity, color temperature, +/- green, and individual red, green, blue, and white color channels, plus white-color cross fade, and fan control
 - b. CCT mode shall require not more than 10 DMX channels and provide control over intensity, color temperature, and +/- green, and fan control
 - c. CCT & HSI mode shall use not more than 16 DMX channels and provide control over intensity, color temperature, +/- green, color hue, color saturation, and white-color crossfade, and fan control
 - d. RGBW mode shall use not more than 14 DMX channels and provide control over intensity and individual red, green, blue, and white color channels, and fan control
 - e. HSI mode shall use not more than 10 DMX channels and provide control over color hue, color saturation and intensity, and fan control
 - f. Gel mode shall use not more than 19 channels and provide control over intensity, CCT selection, color matching selection, brand selection, gel category selection, and gel color selections for two different gels, gel one to gel two cross fade, transition type, and fan control
 - g. x, y Coordinate mode shall use not more than 17 channels and provide control over intensity, x1 and y1 coordinates, x2 and y2 coordinates, xy1 to xy2 cross fade, transition type, and fan control

10. The 8 bit profiles with additional coarse/fine option shall require 2 DMX channels for all functions that include the coarse/fine option and 1 DMX channel for all other functions
 - a. CCT & RGBW C/F mode shall require not more than 18 channels and provide coarse/fine control for intensity, color temperature, individual red, green, blue, and white color channels, and single channel control over white-color cross fade and +/- green, and fan control
 - b. CCT C/F mode shall require not more than 9 DMX channels and provide coarse/fine control over intensity, color temperature, and single channel control over +/- green, and fan control
 - c. CCT & HSI C/F mode shall use not more than 14 DMX channels and provide coarse/fine control over intensity, color temperature, color hue, color saturation, and single channel control white-color crossfade, and +/- green, and fan control
 - d. RGBW C/F mode shall use not more than 14 DMX channels and provide coarse/fine control over intensity and individual red, green, blue, and white color channels, and fan control
 - e. HSI mode shall use not more than 10 DMX channels and provide coarse/fine control over color hue, color saturation and intensity, and fan control

G. Dimming

1. The fixture shall allow continuous linear and flicker free dimming from 0% to 100% in an 8 bit mode (0.3922% per step) or 16 bite mode (0.001529% per step).
2. Coarse and fine dimming shall be possible with 2 consecutive DMX channels in the 8 bit mode. The first channel shall allow setting the target value in 256 steps from 0 to 100% output value. The second channel shall allow an additional fine adjustment in 256 steps from 0 to 10% output value.

H. Accessories

Following accessories shall be available

1. General accessories:
 - a. Safety cable
 - b. Junior pipe clamp
2. Following front end accessories:
 - a. 4-leaf barndoor
 - b. 16-Chamber eggcrate
 - c. SkyPanel Remote
 - d. Snoot
 - e. 30° Honeycomb
 - f. 60° Honeycomb
 - g. Heavy, Lite, Standard, and Intensifier Panels
 - h. SkyBender
 - i. Extra Diffusion Slot
 - j. Chimera Light Banks
 - k. DoP choice light banks
 - l. Center Mount Yoke
 - m. Fixed Center Mount Yoke
 - n. Double Verticle Yoke
 - o. Battery Adapter Plate for Anton/Bauer
 - p. V-Mount Battery Adapter Plate
 - q. 0.5, 1, 3, 10, & 15 m DC Cable
 - r. 3m Daisy Chain Cable
 - s. Rail Mount Adapter for SkyPanel PSU
 - t. Super Clamp Adapter for SkyPanel PSU
 - u. FlexDoor (2-leaf fabric barndoor)
 - v. Molded Case