

## Chroma-Q Inspire Specification (Terminal Strip model – UL924 Control)

### COLOUR MIXING LED HOUSE LIGHT FIXTURE – UL924 CONTROL

#### A. General

1. The fixture shall be a full spectrum colour mixing fixture employing a red, green, blue and white LED engine. The fixture shall be an Inspire house light unit (Terminal Strip model) by Chroma-Q or approved equal.
2. The fixture shall be remotely controlled and configured by a Chroma-Q Inspire External Control Box UL924 unit via ANSI E1.11 USITT DMX-512A protocol.
3. The fixture shall provide fully homogenised, colour-mixed output as well as warm and cool white output.
4. The fixture shall be suitable for hanging pendant or flush-mount ceiling applications.
5. The fixture shall be UL 1573 listed for stage and studio use.
6. The fixture shall comply with the ANSI E1.11 USITT DMX-512A control standard.
7. The colour rendering index of the fixture shall be 90 CRI.
8. Fixture colour temperature (CCT) shall be adjustable between 1,000° and 10,000° Kelvin.
9. The fixture's LED lamp life shall have a L70 rating at a minimum of 50,000 hours.
10. Fixtures shall be factory calibrated to ensure all units output the same exact colour.
11. Fixtures which do not comply with this specification shall not be accepted.

#### B. Physical

1. The fixture housing shall be constructed of robust anodised extruded aluminium and shall be free of pits and burrs.
2. The fixture shall house a discreet cable management system.
3. The fixture housing shall provide additional protection built around the optics.
4. The fixture housing shall be available in either black and white colour.
5. Power supply, cooling and electronics shall be integral to each unit.
6. Fixture net weight (without fixings) shall be 6.0kg (13.5 lbs.).
7. Fixture net dimensions (without fixings) shall be (W x H x D) 181mm x 404mm x 181mm (7" x 16" x 7").

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8. The fixture shall include a built-in mounting bracket with a 12.7mm (1/2") diameter hole.
9. Optional accessories available shall include but not be limited to:
  - a. top hat/snoot (either black or white colour).
  - b. yoke mount kit (either black or white colour).
  - c. barndoor (either black or white colour).
  - d. blind sloped ceiling kit - 0° to 15° angle (either black or white colour trim).
  - e. blind sloped ceiling kit - 20° to 30° angle (either black or white colour trim).

### C. Agency Compliance and Environmental

1. The fixture shall be UL Listed and shall be so labeled.
2. The fixture Approvals shall include the following: CISPR 22/EN55022 & CISPR 24/EN55024, ICES-003 Issue 4:2004 / FCC Part 15 Subpart B:2010, CSA C22.2 No. 166-M1983: R2008, UL 1573:2003 (R2010), IEC 60598-2-17.
3. The IP rating of the fixture shall be IP20 for dry location use.

### D. Thermal

1. The fixture shall be cooled via natural convention without the aid of fans.
2. The fixture shall operate in an ambient temperature range of 0°C (32°F) minimum, to 40° C (104°F) maximum ambient temperature.
3. The fixture shall provide automatic protection to reduce the output when the internal temperature reaches the maximum limit due to extreme ambient temperature conditions.

### E. Electrical

1. The fixture shall be equipped with an internal power supply.
2. The power input rating of the fixture shall be 100V to 240V 50/60 Hz 120VA.
3. The power supply shall have a power factor of 0.9.
4. The fixture's maximum power consumption shall not exceed 100W @ 230V.
5. The fixture's stand-by power consumption shall be 7W @ 230V.
6. Fixture input power shall be via terminal block connection.
7. The fixture requires power from a constant non-dim power source.

## Chroma-Q Inspire Specification (Terminal Strip model – UL924 Control)

### F. Optical

1. The fixture shall incorporate fully homogenized colour mixing optics to eliminate the projection of multiple unsightly colour separation shadows from the different colour sources in the fixture.
2. The fixture shall be available with one of three different beam angle lens options:
  - a. 32° (narrow lens)
  - b. 42° (medium lens)
  - c. 65° (wide lens)
3. The fixture shall provide a smooth and symmetrical uniform wash output.

### G. Light Emitting Diodes

1. The fixture shall have a single visible light source.
2. All LEDs used in the fixture shall be of high brightness and proven quality from reputable LED manufacturers.
3. LED systems manufacturers shall utilize an advanced production LED binning process to maintain LED color consistency.
4. The colour rendering index of the fixture shall be 90 CRI. Or higher
5. LEDs shall be rated for a 50,000-hour LED life to 70% intensity (L70).
6. The hot lumen output (combined) of the fixture shall be:
  - a. 4,390 lumen utilizing narrow lens (32°)
  - b. 4,120 lumen utilizing medium lens (42°)
  - c. 4,390 lumen utilizing wide lens (65°)

### H. Dimming

1. The LED system shall be digitally driven using high-speed pulse width modulation (PWM).
2. The fixture shall offer 4 LED scan rate (PWM) frequency modes for compatibility with video broadcast equipment in order to avoid a flickering effect. The LED scan rate frequency modes shall be controlled via the Inspire External Control Box UL924.
3. The dimming curve shall be of theatrical grade for smooth dimming over longer timed fades and at low intensities.

### I. Fixture Control and Configuration via Inspire External Control Box UL924

## Chroma-Q Inspire Specification (Terminal Strip model – UL924 Control)

1. Fixture DMX input control data sent from the Inspire External Control Box UL924 unit shall be via terminal block connection. DMX output control data sent from fixture shall be via terminal block connection.
2. The fixture shall be able to operate via the Inspire External Control Box UL924 in five DMX controlled modes to include:
  - a. RGBW single – mode providing 4 channels for red, green, blue, white for each individual fixture in each output of the external control box.
  - b. RGBW output – mode providing 4 channels for red, green, blue, white for all fixtures in each output of the external control box.
  - c. Tungsten – mode providing 1 channel for white for all fixtures in each output of the external control box.
  - d. 0-10V – mode providing 1 channel from an external analog control source to the external control box.
  - e. Look Store – mode providing 3 distinct stored looks for playback:
    - 1) Alarm: Highest priority look which is played back in the event of a dry contact closure provided from an external alarm system. Look overrides the external control box's DMX input.
    - 2) Emergency: Look triggered when emergency power is present. Look overrides the external control box's DMX input.
    - 3) Look: Look recalled from the external control box or look selected to be played in the event of DMX data loss.
3. The fixture shall be able to be controlled and configured via the Inspire External Control Box UL924 including but not limited to:
  - a. Recording and playback of a look created with a DMX controller.
  - b. Selection of loss of DMX data behavior options:
    - 1) OFF – no light output from fixture.
    - 2) HOLD – last valid DMX state output from fixture.
    - 3) LOOK – recorded look output from fixture.
  - c. Selection of four LED scan rate (PWM) frequency modes for compatibility with video broadcast equipment:
    - 1) 1200 Hz
    - 2) 2400 Hz
    - 3) 4800 Hz
    - 4) 9600 Hz

END SPECIFICATION