

Chroma-Q Inspire Specification (Addressing model)

COLOUR MIXING LED HOUSE LIGHT FIXTURE

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 (Addressing) by Chroma-Q or approved equal.
2. The fixture shall provide fully homogenised, colour-mixed output as well as warm and cool white output.
3. The fixture shall be suitable for hanging pendant or flush-mount ceiling applications.
4. The fixture shall be UL 1573 listed for stage and studio use.
5. The fixture shall comply with the ANSI E1.11 USITT DMX-512A control standard.
6. The colour rendering index of the fixture shall be 90 CRI.
7. Fixture colour temperature (CCT) shall be adjustable between 1,000° and 10,000° Kelvin.
8. The fixture's LED lamp life shall have a L70 rating at a minimum of 50,000 hours.
9. Fixtures shall be factory calibrated to ensure all units output the same exact colour.
10. 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").
8. The fixture shall include a built-in mounting bracket with a 12.7mm (1/2") diameter hole.

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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 degree angle (either black or white colour trim).
 - e. blind sloped ceiling kit - 20 to 30 degree 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), UL SUBJECT 8750: 2009, 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 convection 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. The fixture input power shall be via a Neutrik PowerCon input connector.
7. The fixture requires power from a constant non-dim power source.

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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.
3. The dimming curve shall be of theatrical grade for smooth dimming over longer timed fades and at low intensities.

I. Control and User Interface

1. The fixture shall be equipped with one 5-Pin XLR In connector and one 5-Pin XLR Out connector for data connection via USITT DMX512-A control protocol.
2. The fixture shall be capable of standalone operation:

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- a. The fixture shall be assignable as either a master or slave standalone unit.
 - b. Slave designated fixtures can be linked together via DMX cables and controlled from designated master fixture.
 - c. Recording and playback of programmed looks shall be possible in standalone operation.
 - d. The fixture shall offer 31 internal preset looks for standalone operation of which 23 looks are factory-programmed and 8 looks are user programmable.
3. The fixture shall provide an internal effects engine with variable parameters for creation of lighting effects.
 4. The fixture shall be equipped with a two-line backlit LCD display for viewing control and configuration functions.
 5. The fixture shall be equipped with four push buttons located beneath the LCD display for accessing control and configuration functions.
 6. The fixture shall offer five DMX control modes and two standalone control modes to include:
 - a. fxHSI – 7 channel DMX mode providing 4 channels for effects and 3 channels for hue, saturation, intensity control.
 - b. sRGBW – 5 channel DMX mode providing 1 channel for intensity and 4 channels for red, green, blue, white control.
 - c. HSI – 3 channel DMX mode providing 3 channels for hue, saturation, intensity control.
 - d. RGBW – 4 channel DMX mode providing 4 channels for red, green, blue, white control.
 - e. Look sel – 1 channel DMX mode for selection of factory-programmed effects and looks and user-programmed looks.
 - f. Mastr StndAlon – mode to assign unit as master in standalone operation.
 - g. Slave StndAlon – mode to assign unit as slave in standalone operation.
 7. The fixture shall offer configuration and control options including but not limited to:
 - a. Loss of DMX data behavior options:
 - 1) OFF – no light output from fixture
 - 2) HOLD – last valid DMX state output from fixture
 - 3) LOOK 01-31 – selected look output from fixture
 - b. Recording of user-programmed looks to internal flash memory via DMX512-A control protocol.
 - c. Recording of user-programmed looks to internal flash memory via standalone mode.
 - d. Selection of four LED scan rate (PWM) frequency modes for compatibility with video broadcast equipment:
 - 1) 1200 Hz
 - 2) 2400 Hz

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- 3) 4800 Hz
- 4) 9600 Hz

END SPECIFICATION