

# Tender Specifications



## ECLDISPLAYDAT

40W RGB+WW, 35W Variable White or 25W White  
LED gallery light, with data control  
(DMX / Dali T6 or T8 / Knob-dimming )

## 1. General

1. The luminaire shall be an architectural projector which shall completed by a zoomable profile framing (20°-40° / 10°-20°) or profile framing fix (8°) or zoomable washlight (15°-30° / 25°-50°) optics.
2. The luminaire shall be CE, UKCA, RCM, cTUVus, FCC compliant.
3. The luminaire shall comply with the USITT DMX-512 A and ANSI RDM E 1.20 protocol standards, DALI, and also equipped with on board Knob Dimming.
4. The luminaire shall be available in the following light source varinats: 2.700K, 3.000K, 4.000K, 5.600K, 2.700K to 5.600K Variable White and RGB+Warm White; all featuring an average CRI in excess of 90 Ra when measured across the full color temperature range.
5. The luminaire shall feature an LED source with a power of 25W for the White light sources, 35W for Tunable White light source and 40W for the RGB+Warm White light source.
6. The luminaire shall not infringe any Intellectual Property unless licenced by the owner.

## 2. Physical

1. The luminaire shall be constructed from a combinations of rugged die cast aluminium, free of burrs and pits, and high quality thermo plastic all finished in black.
2. The following shall be provided:
  - a) Lens secured with silicone shock mounts.
  - b) Shutter assembly shall allow for +/- 25 rotation.
  - c) 0.95 mm stainless steel shutters.
  - d) Interchangeable zoomable optics for profile or washlight.
  - e) Gel frame holders with one accessory slot, and a top mounted quick release gel frame retained.
  - f) Rugged yoke with sliding positive locking and tool operated yoke clutch.
  - g) Slot with sliding cover for indexal pattern devices.
3. The luminaire shall feature an integral frame holder including safety locks and top latch.
4. The luminaire shall features an adjustable yoke constructed from die-cast aluminium that allows a minimum of 300° tilt rotation and 360° pan rotation.

5. The luminaire shall features a secure locking mechanism for the tilt axis.
6. The luminaire shall have a rugged powder coat finishing.
  - a) Black or White powder coat finishes shall be available as color option.
  - b) Other powder coat colour options shall be available on request.
7. The luminaire shall feature integral power and electronics.
8. The luminaire shall feature a passive cooling system.
9. The luminaire dimentions shall be:
  - a: W: 141 mm (5.5") H: 200 mm (7.8") D: 150 mm (5.9")
  - b: The luminaire shall weight no more than 1,4 Kg (3,08 lbs) without optic.

### **3. LED Emitters**

1. The luminaire shall feature a LED source comprising of a single 25W White LED emitter available in 2.700K, 3.000K, 4.000K, 5.600K, 35W Variable White LED emitter or 40W RGB + Warm White LED emitter customized for Prolights.
2. The luminaire shall feature an LED source consisting only of LED emitters from a know production batch and bin.
3. The luminaires shall feature only LED emitters rated for nominal 50'000-hours LED life to L70.
4. The luminaire shall feature a minimum of three hours burn-In test during its manufacturing process.
5. The luminaire shall feature adjustable PWM frequency to include 25'000 Hz.

### **4. Photometric documentation**

1. The luminaire shall be supplied with a full and detailed photometric report measured by a calibrated two axis photogoniometer in a constant temperature environment and with the luminaire in a stabilised condition with not more than 0.5% variation in output over a 15 minute period.
2. The photometric report supplied with the luminaire shall detail CRI, CQS, TM-30 and spectral distribution at full output.
3. The photometric report supplied with the luminaire shall detail the spectral distribution of each constituent LED colour of LED source.
4. The photometric report supplied with the luminaire shall detail light level measured in lux and foot candles and beam diameter measured in meters and feet at 1 m, 2 m, 3 m

4 m, 5 m, 6 m, 7.5 m, 10 m, 15 m, 20 m, 25 m 30 m, 40 m distance with the luminaire at the following beam angle: 8° Profile, 20°-40° and 10°-40° Profile Zoom, 15°-30° and 25°-50° Wash Zoom.

5. The photometric report supplied with the fixture shall include ISO LUX and candela diagrams, showing light distribution in both X and Y planes measured with the luminaire mounted at height of 10 meters.

## **5. Photometric performance**

1. The luminaire shall meet the following minimum photometric performance requirements which should be supported by the photometric documentation:
  - The luminaire shall have a colour temperature of +/- 125 K from the selected White LED source (2.700K, 3.000K, 4.000K, 5.600K) with LEDs at full on.
  - The RGB+Warm White version shall have a colour temperature within 100 K of the target colour temperature when set to a preset of 3.200 K or 5.600 K.
  - The luminaire shall have a CRI in excess of 90 for all White, Variable White or RGB+Warm White LED source variant.
  - The luminaire shall have an output in excess of 1'586 lm with mounted zoomable profile lens at 40° for the white light source of 2.800 K.
  - The luminaire shall have an output in excess of 1'676 lm with mounted zoomable profile lens at 40° for the white light source of 3.000 K.
  - The luminaire shall have an output in excess of 1'810 lm with mounted zoomable profile lens at 40° for the white light source of 4.000 K.
  - The luminaire shall have an output in excess of 1'869 lm with mounted zoomable profile lens at 40° for the white light source of 5.600 K.
  - The luminaire shall have an output in excess of 360 lm @ Full On, with mounted zoomable profile lens at 40° for the RGB+Warm White Light Source.
  - The luminaire shall have an output in excess of 1'060 lm @ Full On, with mounted zoomable profile lens at 40° for the Variable White Light Source.

## **6. Electrical**

1. The luminaire shall feature an internal auto sensing power supply with an input range from 100 V to 240 V AC 50/60 Hz protect by on board fuse.
2. The luminaire shall feature a nominal power consumption of 33 W for Variable White and Fix White versions and 35 W for the RGB+Warm White version.

3. The luminaire shall feature main input through DIN connector.
4. The luminaire shall feature DIN connector for DMX and DALI input. with a switcher to select DMX or DALI protocol.
5. The luminaire shall feature setting through standard RDM protocol.
6. The luminaire shall be compatible with the USITT DMX-512A RDM protocol.
7. The luminaire shall support firmware upgrades using a dedicated UP-LOADER device using the signal connectors.
8. The luminaire shall meet all requirements of the LVD (Low Voltage Directive) 2014/35EC and with the EMC (Electromagnetic Compatibility Directive) 2014/30/EU.

## **7. Optical**

1. The light beam should have a 2-to-1 centre-to-edge drop-off ratio.
2. The luminaire shall provide, but not be limited to:
  - a) Low gate and beam temperature.
  - b) Sharp imaging through a three plane shutter design when using Profile lens.
3. The units shall provide, but not be limited to:
  - a) Zoomable 10 - 20 degrees Profile Lens.
  - b) Zoomable 20 – 40 degrees profile Lens.
  - c) 8° Profile Lens.
  - d) Zoomable 15 - 30 degrees Wash Lens.
  - e) Zoomable 25 - 50 degrees Wash Lens.
  - f) High quality pattern imaging.
  - g) Sharp shutter cuts without elation.
  - h) Shutter warping and burnout in normal use shall be unacceptable.
  - i) Adjustable hard and soft beam edges.

## **8. Environmental**

1. The luminaire shall feature IP 20 rating.
2. The luminaire shall be capable of operating in ambient temperature range of -10°C (14°F) to +45°C (113°F).
3. The luminaire shall be passive convention cooled.

4. Thermal management shall include LED array circuit board temperature sensor.
5. Users shall permit monitoring of temperature sensor via RDM.
6. Fixtures that do not provide the active thermal monitoring of LED board, shall not be acceptable.

## **9. Control And User Interface**

1. The luminaire shall feature a temperature sensor which shall be accessible in real time via RDM.
2. The luminaire shall be compatible with the ANSI RDM E 1.20 standard.
3. Fixtures not offering RDM compatibility features access or temperature monitoring via RDM shall not be acceptable.
4. The luminaire shall have all of the following on board control options supported: DMX, DALI T6 (Variable White and Fix White), DALI T8 (RGB+Warm White), and on board Knob Dimming.
5. The luminaire shall be equipped with on board switch to select among DMX / DALI input signal.
6. The luminaire shall feature multiple DMX control modes.
7. The RGB+Warm White Light source variant shall offer a tungsten emulation option to emulate both the intensity and colour shift characteristics of tungsten source.
8. The RGB+Warm White Light source variant shall offer a set of standard industry gel color preset accessible via DMX on dedicated channel.
9. The luminaire shall offer additional user definable options to including:
  - a) Selection between four Dimmer curves.
  - b) Selection between four Dimmer speeds.
  - c) Loss of data behavior options.
10. The luminaire shall offer stand alone functionalities:
  - a) Fixtures in Stand-Alone state shall restore to the setting preset prior to the power cycling.
11. Fixtures without stand-alone operation features described above shall not be acceptable.

## **10. Dimming**

1. The luminaire shall feature continuous smooth and linear dimming of intensity from 0% to 100%.
2. The luminaire shall feature control of intensity in 8 bit or 16 bit mode.
3. LED control shall be compatible with broadcast equipment in the following ways:
  - a) PWM control of LED levels shall be imperceptible to video cameras and related equipment.
  - b) PWM rates shall be adjustable by the user at the fixture if necessary to avoid any visible interference on video camera and related equipment.
4. The luminaire shall feature a minimum of 4 options for dimming curves, selectable from the on board menu.
5. Dimming curves shall be optimized for smooth dimming over longer time fades.
6. The LED system shall be digitally driven using high-speed pulse width PWM modulation.

## **11. Accessories**

The following accessories shall be available as an optional:

1. Full Snoot.
2. Half Snoot.
3. Anti-glare louvre.
4. Barndoor and Filter frame holder.
5. Gobo Holder with manual adjustable index position system.
6. Ceiling adapter Kit.
7. Flange for ceiling adapter Kit.
8. Zoomable Wash Lens 25-50 degrees.
9. Zoomable Wash Lens 15-30 degrees.
10. Zoomable Profile Lens 20-40 degrees.
11. Zoomable Profile Lens 10-20 degrees.
12. Fix Profile Lens 8 degrees.
13. Track Adaptor.
14. Up-loader Tool (UPBOX1) with Microsoft Software.

Approved device shall be the PROLIGHTS ECLDISPLAYDAT; no alternates or equals.