Specifications – Claypaky Xtylos Luminaire

GENERAL

A.) Overview

1.) The unit shall have a light source comprised of three (3) laser engines (one red, one green, and one blue) and have an output of 2875 lumens producing a solid, flat field of saturated light without any visible hotspots.

2.) The unit's head, yoke and enclosure housings shall be constructed of a combination of formed plastics, steel, and aluminum alloys for light weight, strength, and durability.

3.) The unit shall be black in color.

4.) The unit shall be cETLus listed and CE-marked. The unit shall conform to the following European Directives:
   a) 2014/35/EU - Safety of electrical equipment supplied at low voltage (LVD)
   b) 2014/30/EU - Electromagnetic Compatibility (EMC)
   c) 2011/65/EU - Restriction of the use of certain hazardous substances (RoHS)
   d) 2009/125/EC - EcoDesign requirements for Energy-related Products (ErP)

5.) The unit shall conform to USITT DMX-512A (RDM), Art-Net, Claypaky WebServer protocol standards.

6.) The unit shall have a backlit LCD monochrome display for manual control and settings of the fixture. The unit shall have AUTOTEST functionality to read and store fixture error messages that can be displayed on the LCD display.

7.) The unit shall have a long life, self-charging battery that allows basic information of the luminaire to viewed on the LCD display without connecting the unit to an AC power source.

8.) The unit's beam shaping, and effects shall include one (1) static gobo wheel with apertures of 1^{o} to 7^{o} in 0.5^{o} increments and one (1) rotating gobo wheel with seven (7) rotatable/indexable gobos.

9.) The unit shall have dedicated control connections for:
   a) DMX512 with input and throughput via 5-Pin DMX XLR connectors
   b) RDM with input and throughput via 5-Pin DMX XLR connectors
   c) DMX512 with input via an Ethernet RJ45 connector

10.) All control and power input connectors shall be located on the same panel of the unit's enclosure. The unit shall have a ON/OFF switch.

B.) Physical

1.) The unit's head, yoke and enclosure housings shall be constructed of a combination of formed plastics, steel, and aluminum alloys for light weight, strength, and durability.

2.) The unit's head covers shall use captive screws for easy removal and access to the luminaire's gobos, colors, etc. for cleaning and removal.

3.) The unit shall be no more than 582 millimeters or 22.9 inches long and 391 millimeters or 15.4 inches wide at its greatest dimensions (not including accessories).

4.) The unit shall hang on 450 millimeter or 17.7 inch centers.

5.) The unit shall weigh no more than 24.0 kilograms or 52.13 pounds (not including accessories).

6.) The unit's enclosure shall accept two fast-lock omega clamp brackets to accept suitable hooks (or clamps, by others) for hanging and the unit shall operate in any working position. The unit shall be supplied with 2 fast-lock omega clamp brackets as standard accessories.

7.) The unit's enclosure shall have a label (on the same side of the hanging points) stating, "Front" to indicate the direction of hang for the unit.

8.) The unit's enclosure shall be equipped with two (2) handles specifically designed to support the weight of the unit when being carried.

9.) The unit's enclosure shall have a dedicated safety cable (safety bond) anchor point other than the luminaire's handles.

10.) The unit shall be at least IP20 rated.

C.) Mechanical

1.) The unit shall contain two independent three-phase stepper motors to provide accurate movement of the head through 540° in the horizontal plane (pan) and 251° in the vertical plane (tilt). The pan and tilt mechanisms shall be belt-driven, providing positional resolution and repeatability of +/- 0.28° on either axis.

2.) The unit shall have exterior and interior labels indicating the unit is equipped with laser modules and the risks associated therewith.

3.) The unit shall have independent locking mechanisms for pan and tilt to prevent movement for traveling or servicing the fixture.

D.) Electrical

1.) The unit will be equipped for to accept a Neutrik powerCON TRUE1® connector for power input and shall operate between the voltages of 100VAC to 240VAC (single phase, 50/60 Hertz) and not draw more than 400VAC at 230VAC at 50 Hz. The unit shall offer a throughput AC connector for connecting same type fixtures in daisy-chain fashion for power (up to a maximum of four (4) same type fixtures or 1600VA).

2.) The unit shall be supplied with a 3-meter AC input cable with a Neutrik powerCON TRUE1® connector on one end and the other end prepped by the supplier to accept an approved and suitable connector (by others) as required to connect to power source.

3.) The unit's light source shall be a light source comprised of three (3) laser engines (one red, one green, and one blue) that produces saturated color mixing. The user can control the LED engine's refresh frequency rate from 4700Hz to 22635Hz.

E.) Environmental

1.) Maximum operating ambient temperature shall not exceed 40 degrees Celsius or 104 degrees Fahrenheit.

2.) The unit shall comply with all RoHS requirements and be mercury free.

3.) The unit shall be able to illuminate objects 10 meters or 32.83 feet or further safely.

F.) Operation

1.) The unit shall have dedicated control connections for:

a) DMX512 with input and throughput via 5-Pin DMX XLR connectors
b) RDM with input and throughput via 5-Pin DMX XLR connectors
c) DMX512 with input via an Ethernet RJ45 connector

2.) The unit shall have thirty (30) channels of DMX-512A control as follows:

1. Red Color
2. Red Color Fine
3. Green Color
4. Green Color Fine
5. Blue Color
6. Blue Color Fine
7. CTO
8. Show-Setup
9. Dimmer
10. Dimmer Fine
11. Strobe
12. Static Gobo Change
13. Rotating Gobo Selection
14. Rotating Gobo Rotate
15. Rotating Gobo Rotate Fine
16. Prisms Wheel Selection
17. Prisms Wheel Rotation
18. Prism Insert
19. Prism Rotation
20. Smart Fading
21. Focus
22. Focus Fine
23. Pan
24. Pan Fine
25. Tilt
26. Tilt Fine
27. Function
28. Reset
29. Function 2
30. Frequency

3.) The unit shall include an LCD menu system that will allow users to set fixture operating parameters and display fixture errors as follows:

a) Setup
   1. DMX Address
   2. Work Mode
   3. Fixture ID
   4. Ethernet Interface
b) Option
   1. Pan / Tilt

2. Dimmer Curve
3. Change Rotating Gobo Speed (Chg RotGobo Speed)
4. Display
5. RGB Gamma
6. PWM Frequency
7. Setting

c) Information
1. System Errors
2. Fixture Hours
3. Laser Hours
4. System Version
5. Board Diagnostic
6. DMX Monitor
7. Fans Monitor
8. RDM Unique ID
9. Sensor Status
10. Rotating Gobos Indexing (Rot Gobos Indexing)
11. 3 Prisms Indexing
12. Network Parameters
13. Serial Number

d) Manual Control
1. Reset
2. Channel

e) Test
1. Pan/Tilt
2. Color
3. Effects
4. Complete

f) Advanced *(password protected)*
1. Upload Firmware
2. Setup Model
3. Calibration
4. Rotating Gobos Indexing (Rot Gobos Indexing)
5. 3 Prisms Indexing
6. Menu Locking
7. Laser Temperature

4.) The unit shall incorporate three (3) operational modes as set by the operator. For operation in the United States of America, these modes shall be in full compliance with Federal Drug Administration's (FDA) Center for Devices and Radiological Health (CDRH). These modes shall be clearly indicated in the product information documentation and in the unit's menu system. The modes shall be labeled, "Standard", "Smart", and "Service".

5.) The unit shall offer a dedicated Service mode setting so the unit produces laser light sufficient to allow the unit to be tested and serviced by qualified service technicians.

6.) The unit shall include the following effects mechanisms/effects/features:

a) One (1) rotating gobo wheel with seven (7) rotating and indexable gobos on each wheel. The rotating gobos are easily interchangeable to allow customization of the unit. The unit shall be equipped with a standard set of gobos that have an image size of 11 mm diameter and the gobo shall not be larger than 25,9 mm in total diameter.

b) One (1) static gobo wheel with four (4) fixed gobos and with apertures of 1^{o} to 7^{o} in 0.5^{o} increments.

c) An electronic 24-bit dimmer that provides full field dimming and has four (4) user-selectable dimming curves. The unit's dimmer must allow for smooth timed fades and fast blackouts.
d) An electronic strobe that operates in a linear fashion from 1 to 25 flashes per second or 3 levels of random effects.
e) One (1) frost filter.
f) One (1) prism disk containing one (1) 6-facet pyramid prism, one (1) elliptical (convex) prism one (1) 6-facet linear prism so each prism is indexable 540° and can spin clockwise, counter-clockwise at user-controlled variable speeds.
g) One (1) 16-facet prism that is indexable 540° and can spin clockwise, counter-clockwise at user-controlled variable speeds.
h) A light source comprised of RGB laser engines for color mixing system.
i) Laser driver safety control logic at firmware level to switch-off light output in a safe state, when parameters outside of working range (redundant with hardware level safety).

7.) For operation in the United States of America the manufacturer shall offer a comprehensive training program and testing in full compliance with Federal Drug Administration's (FDA) Center for Devices and Radiological Health (CDRH) to obtain a necessary variance to own and operate the unit. This training and testing shall be no cost to the purchaser or operator of the unit.

H). Warranty

1.) The manufacturer of the luminaire shall offer a two-year limited warranty on the luminaire in its entirety.
2.) Manufacturers not offering a minimum of a two-year warranty shall not be accepted.

I.) Accessories

1.) The unit shall include the following accessories for each unit purchased:

a) One (1) each 3-meter AC input cable that includes a Neutrik powerCON® power input connector and the other end prepped by the supplier to accept an approved and suitable connector (by others) as required to connect to power source.
b) Two (2) each fast-lock omega clamp brackets.
c) Product safety documentation.

2.) The following accessories shall be made available for each unit:

a) A preformed road case shell insert.

- End of Specification -

(Version 14 July 2020, this version supersedes all previous versions)