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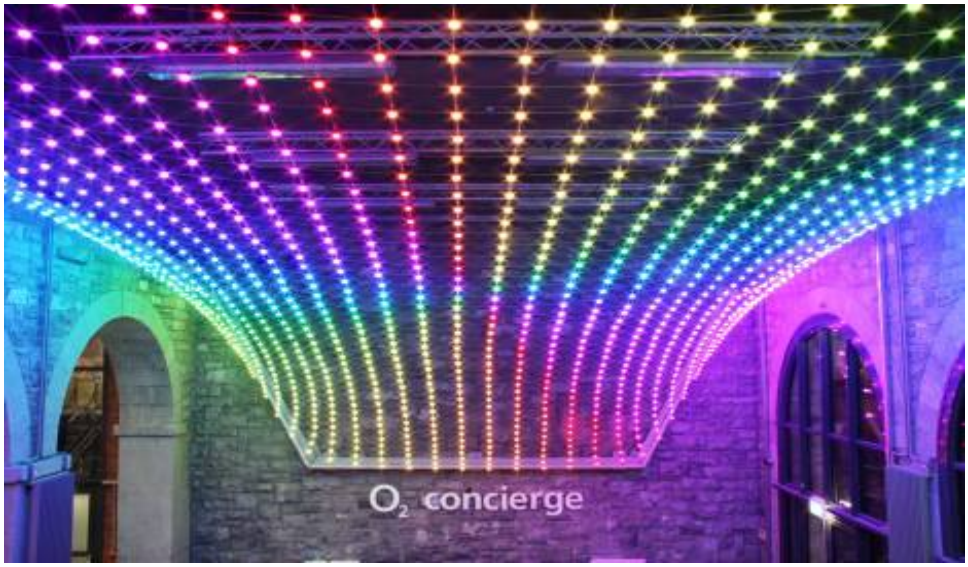
PRAECLARUS



OVERVIEW

Praeclarus represents a new generation of combined power and data lighting products principally intended for the production of architectural matrix and three dimensional lighting arrays. With a range of single colour, RGB or RGBW LED units supported by a versatile user defined stainless steel wire structure, the system can produce truly beautiful lighting effects with unparalleled versatility of form and transparency. Despite being on a common cable structure each LED has full independent control.

The system comprises a user specified support cables structure comprising stainless steel wires. The structure supports virtually any number of LED units. An LED unit can be fitted at any crossing intersection of the support cables. A version which operates with parallel wires is also available and simplifies installation for some applications. The LED unit's mechanical connection to the support cables is based on small spring clips which are robust and easy to fit.

The copper loaded stainless steel cable provides mechanical support, electrical supply and control data for the LED units. Because there are no other wires the system has a very high degree of transparency to provide an uncluttered and pure lighting effect. Cables can be run in curved formations and at virtually any spacing for excellent design flexibility.

The system components are described overleaf;-

SUPPORT CABLES

Support cables are stainless steel flexible wires. The diameter is generally 1mm. For small applications standard stainless steel wire is adequate but for larger installations copper loaded cable is recommended to reduce power loss. The support cables form either a unidirectional or X / Y mesh of with LEDs at a user defined spacing and shape. In the X / Y mode all cables are electrically common in one axis and are connected to earth at one or both ends. The other axis cables connect to the power unit(s) output. (see drawing below). Glasson Electronics supply a range of cable terminations and insulators which simplify support cables installation. We also supply custom finished aluminium extrusion for the support cables mechanical fixing to wall or ceilings. For the parallel wire version all the wires run in the same direction with LED units connected across a given pair of wires.

LED UNIT

The Praeclarus LED unit has recently been re designed and now forms a compact clip on unit available with white diffused, smoked or clear caps. There are two main variants, one for systems based on an XY cable configuration. This version is particularly suited to installations where the required shape is curved in two directions. The second version connects to cables running in parallel.

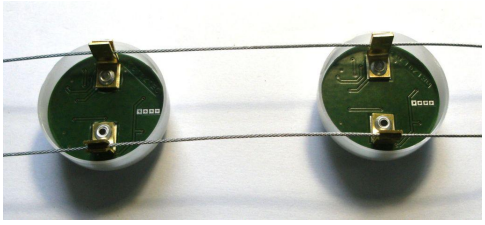
Either version comprises single colour, RGB or RGBW LEDS and special decoding circuitry to interpret our unique combined power and data system.

During installation LED units are each given a unique address using the hand programmer described below.

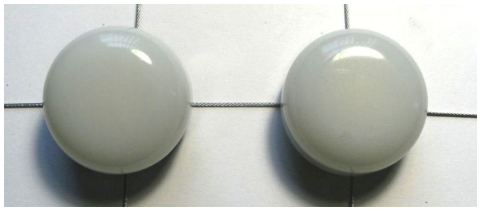
PRAECLARUS LED UNITS ARE AVAILABLE WITH A RANGE OF DIFFUSERS.

LED UNIT MAIN FEATURES

- Available with arrange of diffusers.
- Clip on cable mounting for easy installation.
- Single colour, RGB or RGBW versions.
- 120 degree viewing angle.
- Failure of one LED unit will not compromise the rest of the system.
- Low diameter support cable for high transparency.



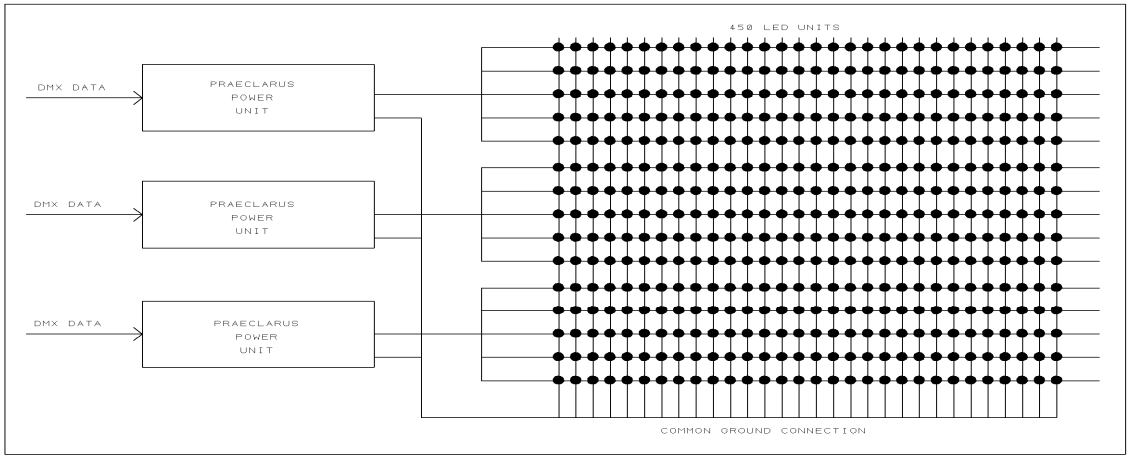
PRAECLARUS LED UNIT FEATURES SIMPLE CLIP ON CABLE TERMINATION.



RM200 / 500 POWER UNIT

The RM200 / 500 power units provide the combined electrical power and control information for up to a full DMX universe. The power units have a single positive combined power and data output and a common ground connection. The common ground feature allows grids of virtually any size to be accommodated because the grid is simply sub divided into sections with each section controlled by a separate power unit.

The drawing below details a system with 450 LED units arranged as a 30 x 15 matrix. Each power unit drives 5 strings of LED units. Each string has 30 LEDs. Each of the 450 LED units is individually controllable.



POWER UNIT MAIN FEATURES

- Controls a full DMX universe.
- Protection from wiring faults.
- DMX Record / playback option.
- 86 - 256VAC universal mains input.
- Safe ELV 24V-48V combined power and data output.
- Common output directly connected to mains earth for extra safety.
- Compact unit measuring just 246 x 200 x 75mm.
- Weight 2.4Kg
- Max operating Temperature 40C.

HAND PROGRAMMER

The hand programmer is a commissioning and maintenance tool used to set the address of each LED unit. This is performed as part of system commissioning. The hand programmer uses a short range infra red link to se the address. Once the address is set the programmer automatically increments to the next address. The whole process takes just a few seconds. An LED units address can be programmed thousands of times if required. The programmer can also read an LED unit address.

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