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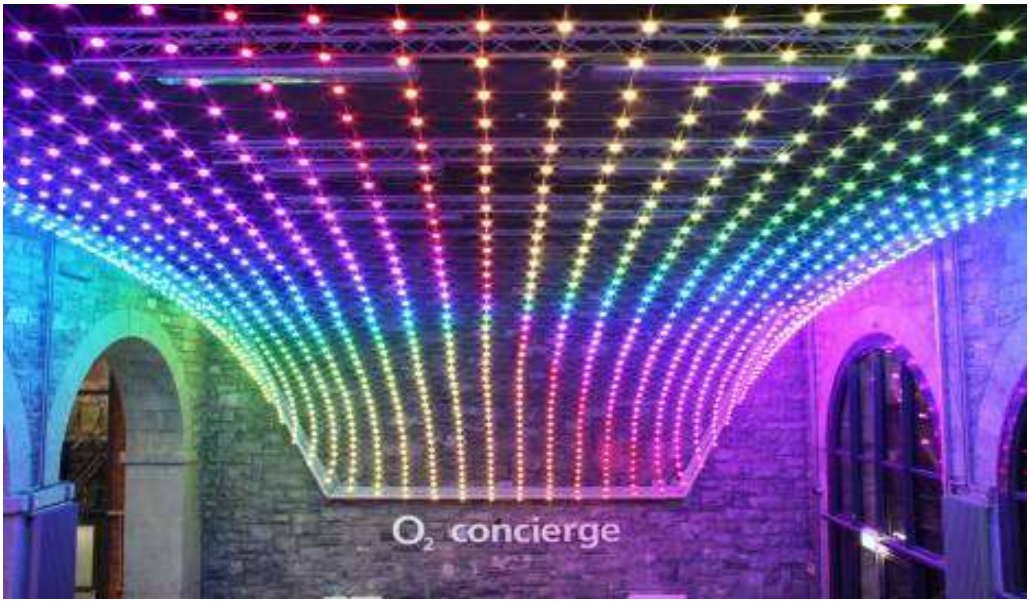
PRAECLARUS



OVERVIEW

Praeclarus from Glasson Electronics 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 its high intensity RGB or single colour 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 colour control.

The system comprises a user specified support cables structure comprised of 1.0mm diameter stainless steel wire. The structure supports virtually any number of high intensity single colour or RGB 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 give an incredibly uncluttered and pure lighting effect. The wires can be run in curved formations and at virtually any spacing for excellent design flexibility.

The system components are described overleaf;-

SUPPORT CABLES

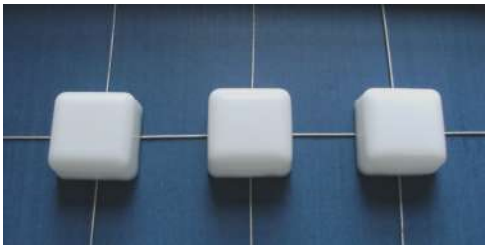
The support cables are made from 1.0mm copper loaded stainless steel flexible wires. For small applications standard stainless steel wire is adequate but for larger installation copper loaded cable is recommended to reduce power losses. The support cables form either a unidirectional or an X / Y mesh of cables at a user defined spacing and shape. With the X / Y mode the cables are all common in one axes and will be electrically connected to earth at one or both ends. In the other axis the cables connect to the power unit(s) output. Glasson Electronics supply a range of cable terminations and insulators which simplify the support cables installation. We also supply custom finished aluminium extrusion for the support cables mechanical fixing to wall or ceilings. In the parallel wire version all the wires run in the same direction with LED units connected across a given pair of wires.

LED UNIT

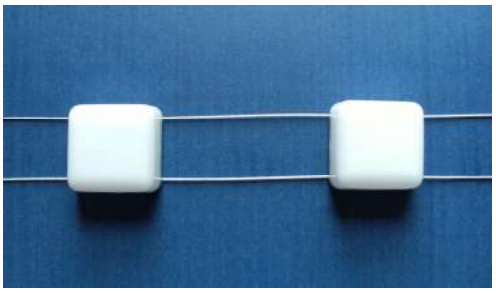
The LED unit has recently been re designed and now forms a compact clip on unit. As mentioned there are two variants, one for systems based on an XY cable configuration. This version is particularly suited to installations where the required shape is curved in two directions. The second version connects to cables running in parallel.

Either version comprises four single colour or RGB LEDS and special decoding circuitry to interpret the combined power and data signals.

During installation the LED units are each given an address value using the hand programmer described below.



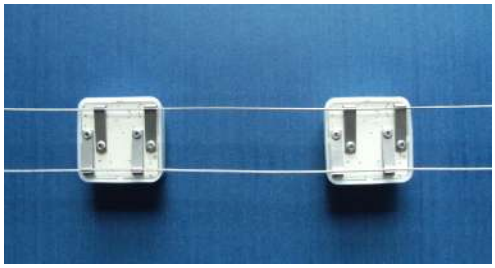
PRAECLARUS LED UNITS WITH X Y CABLE ARRANGEMENT.



PRAECLARUS LED UNIT FOR PARALLEL CABLE ARRANGEMENT.

LED UNIT MAIN FEATURES

- Four high brightness RGB (or single colour) LEDs per unit giving typically 3000mcd total light output.
- 120 degree viewing angle.
- Easily replaced PCB assembly for quick. cost effective on site repairs.
- Failure of one LED unit will not affect others on the same cable.
- Supply voltage 24V.
- Operating current 60mA.

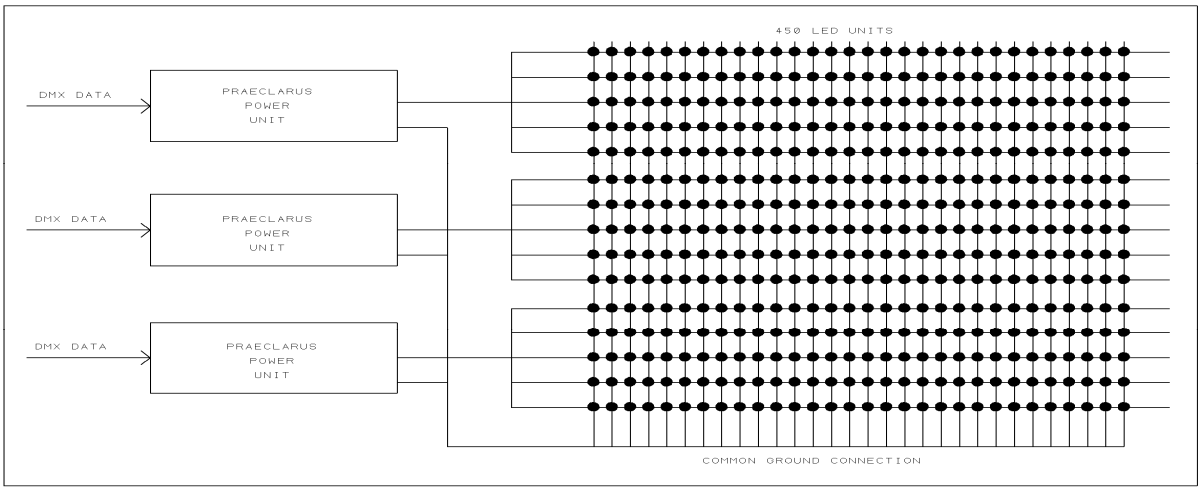


POWER UNIT

Each power unit provides the combined electrical power and control information for up

to 170 LED units (200 single colour). 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 power unit can individually control every LED connected to it.



POWER UNIT MAIN FEATURES

- Full RGB control of up to 170 LED units (200 single colour).
- DMX input (ART NET version available).
- 60 - 260VAC input.
- Safe ELV 24V combined power and data output.
- Common output directly connected to mains earth for extra safety.
- Short circuit protected.

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 reset thousands of times if required. The programmer can also read an LED unit address.