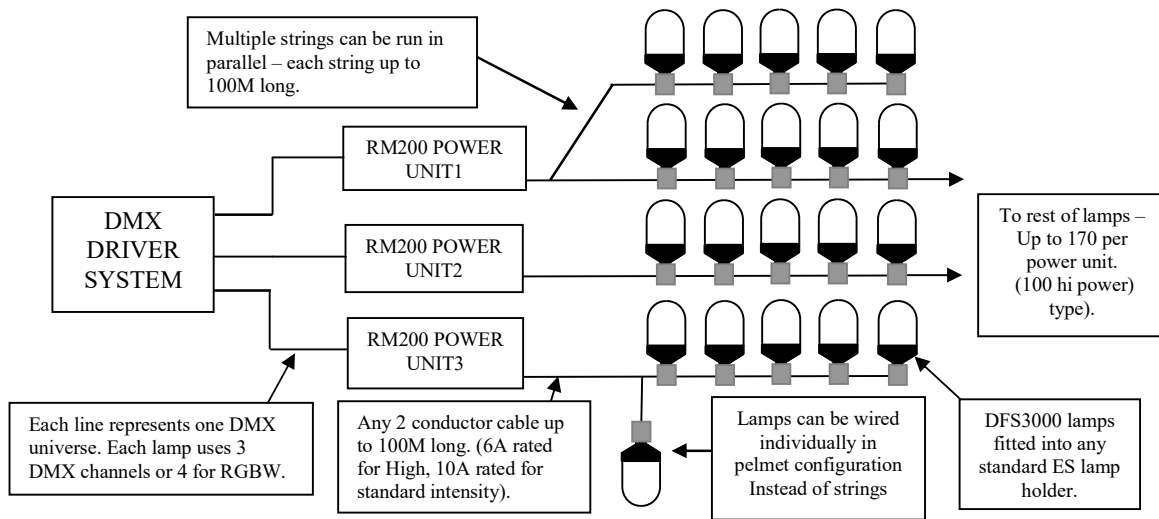# DFS3000RGB SYSTEM DESCRIPTION.



DFS3000 offers the capacity to create stunning lighting effects with a very simple installation strategy.

Externally DFS3000 LED units are identical to standard ES fitting bulbs. Internally they incorporate special microprocessor controlled circuitry to decode our advanced combined power and data system and control built in high intensity RGB or RGBW LEDS. Up to 170 LEDS can be connected on a single two conductor cable. Each LED unit is independently controllable despite being on the same cable.

The LEDs are driven with true linear variable current, not PWM, making the system ideal for use in studios and situations where cameras are present. The system has recently improved to offer 10 bit dynamic range and 13 bit dimming for super smooth fading even at low intensities. A new Super High intensity LED unit is also available.

The ability to control large numbers of LED units with an incredibly simple wiring strategy realises excellent flexibility and reduced installation costs.

# TYPICAL INSTALLATION EXAMPLE



Multiple strings can be run in parallel – each string up to 100M long.

RM200 POWER UNIT1

DMX DRIVER SYSTEM

RM200 POWER UNIT2

RM200 POWER UNIT3

To rest of lamps – Up to 170 per power unit. (100 hi power) type).

Each line represents one DMX universe. Each lamp uses 3 DMX channels or 4 for RGBW.

Any 2 conductor cable up to 100M long. (6A rated for High, 10A rated for standard intensity).

Lamps can be wired individually in pelmet configuration Instead of strings

DFS3000 lamps fitted into any standard ES lamp holder.

## TECHNICAL OVERVIEW

The system comprises the following components-

## RM200 POWER SUPPLY



## FEATURES

- Control of up to 170 DFS3000 Std LED units (100 Hi or SH units).
- Protected from lamp wiring faults.
- DMX data input with standard RGB or RGBW 3 or 4 channels per LED unit.
- Optional DMX control byte to place power unit into low power standby.
- 110 / 230VAC input.
- Power consumption 250W max.
- Comprehensive self diagnostic system.
- Output voltage 24V for Std, 32V for hi and 48V SH.
- 100M max festoon cable length.
- Compact unit measuring just 246 x 200 x 75mm.
- Weight 2.4Kg

- Max operating Temperature 40C.

## EP200 POWER UNIT

For outside applications we also offer the EP variant power unit. This is based on an IP66 enclosure and has waterproof cable glands for input and output cables. The unit can be supplied with a white or clear lid. The specification is the same as the RM200 unit except the dimensions which are 26 x 14.5 x 13cm.

## DFS3000 LED LAMP UNIT

The DFS3000RGB led unit interprets the combined power and data signal and control internal 4, 6 or now 11 RGB or RGBW LEDs.

   The system has recently been upgraded to give 10 bit dynamic range internally expanding the DMX control range and 13 bit fading. This strategy gives super smooth dimming even at low intensity.

## DFS 3000 LAMP UNIT FEATURES

- IP66 rating for long term outdoor environmental protection.
- Polarity insensitive – connects to the cable either way around.
- Tri colour LEDS for superior colour mixing.
- Four, six or 11 RGB or RGBW LEDS per unit.
- Linear current control (not PWM) for excellent flicker free colours when viewed with a video camera.
- Each lamp has a unique address which is user programmed using the hand programmer described below. This can be reprogrammed thousands of times.
- Internal fuse resistor to prevent a single LED unit failure compromising the whole system.
- Standard ES E27 lamp fitting.

- Strong shatterproof moulding.
- Dimensions – Diameter 50mm, Length 100mm.
- Weight 50g.
- Extra high intensity version available.
- Drive voltage – standard 16-28V Hi 24-36V Super Hi 40-48V.
- Current 55mA.
- Wattage std = 1.3W Hi = 1.76W Super High = 2.0W

**INTENSITY**

The figures below represent typical performance figures for each DFS3000RGB LED unit standard, Hi and Super Hi versions. The Lumen figure is approximate.

|  | Red | Green | Blue |
|---|---|---|---|
| Standard (MCD) | 1960 | 3360 | 1120 |
| Hi (MCD) | 2940 | 5040 | 1680 |
| Super Hi (MCD)* | 5390 | 9240 | 3080 |
| Standard (Lumen) | 5.8 | 9.7 | 2.97 |
| Hi (Lumen) | 8.3 | 14.6 | 4.4 |
| Super Hi (Lumen)* | 15.95 | 26.6 | 8.1 |

**\*** Super high employs current sharing so full white will NOT be the sum of all colours light output.

# HAND PROGRAMMER

The hand programmer plugs into the DFS3000 lamp unit through the normal lamp contacts. Once connected, the hand programmer can program or read the lamp address. The hand programmer can also initiate a full test of the lamp unit electronics including the LEDS. A lamps address can be reprogrammed thousands of times.

- Size 23 x 10 x 4.5cm.
- Weight 0.5Kg.