

ICELEDTM

ELECTRO STYLING

TUBE

OPERATING GUIDE

WARNING

THIS PRODUCT HAS BEEN DELIBERATELY DESIGNED TO CREATE A HIGHLY NOTICEABLE LIGHTING EFFECT THAT WILL TURN HEADS AT CAR SHOWS AND EXHIBITIONS. BECAUSE OF THIS IT IS EXTREMELY IMPORTANT THAT IT IS **NOT USED ON THE PUBLIC HIGHWAY** TO PREVENT THE DISTRACTION OF OTHER ROAD USERS.

HAVING ISSUED THIS WARNING ICELED WILL NOT ACCEPT ANY RESPONSIBILITY FOR ISSUES ARISING FROM ANY FAILURE TO COMPLY WITH THIS CLEAR INSTRUCTION.

ICELED WILL NOT ACCEPT RESPONSIBILITY FOR ANY OTHER ISSUES ARISING FROM IMPROPER USE OR FITTING OF THIS PRODUCT AS THESE MATTERS ARE BEYOND OUR CONTROL.

THIS PRODUCT USES CLASS 2 LED DEVICES (WITH RESPECT TO IEC825-1 & GENELEC EN 60825-1) WHILE NOT CONSIDERED TO BE HAZARDOUS, DIRECT VIEWING OF THE LED'S AT CLOSE RANGE SHOULD BE AVOIDED.

THIS PRODUCT IS CAPABLE OF PRODUCING STROBOSCOPIC LIGHTING EFFECTS WHEN CONNECTED TO EXTERNAL CONTROLLERS.

Features

ICELED TUBE is an advanced digital light source capable of producing over two million colours. Each tube is divided into several groups of LEDs forming pixels that can be addressed with independent colours. The use of high quality materials throughout ensures that a bright uniform wash of dependable light is available wherever it's needed. Shatterproof Polycarbonate tubing provides an exceptionally tough housing for the electronics inside.

Tubes are available in different lengths ranging from 40cm to 145cm overall. The visible portion of each tube is illuminated by one or more standard 35cm three-pixel sections. End-caps and cable entry add a total of 5cm to each tube giving the following final lengths for installation clearance allowances:

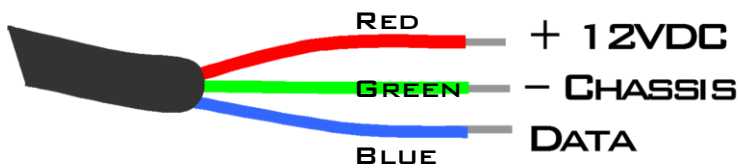
- 40cm (1 section, 3 pixels)
- 75cm (2 sections, 6 pixels)
- 110cm (3 sections, 9 pixels)
- 145cm (4 sections, 12 pixels)

Uses

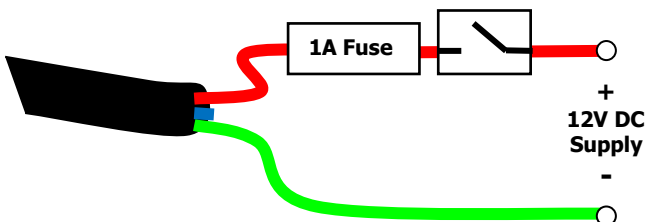
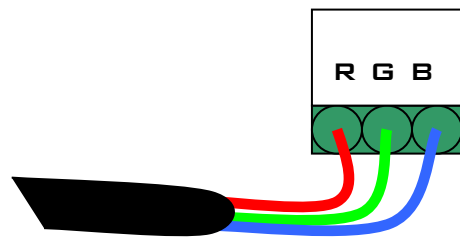
Tubes can be connected to ICELED controllers such as UFO or, in the case of the shortest 40cm length, will also function in a useful stand-alone mode allowing the tube to be used with nothing more than a 12 Volt supply. This makes the 40cm tube a direct replacement for neon in many applications – with the added advantage of being able to produce virtually any colour in the visible spectrum.

Installation

A standard three-core cable connects the tube to a power supply and data source.



If the tube is to be connected to an ICELED controller supplying both power and data, then the colour coded wires simply connect to the corresponding terminals labelled R, G and B on the chosen output.



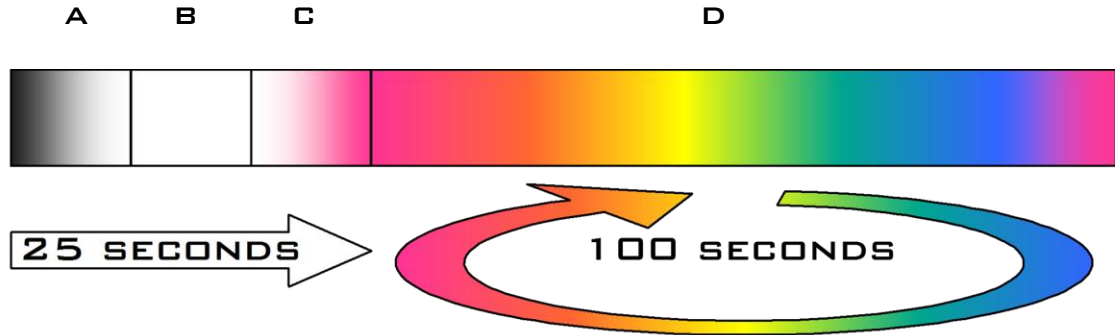
In this case the blue (data) wire is unused and should therefore be insulated or cut off close to the cable end.

If the 40cm tube is to be used in stand-alone mode then the red wire must be connected via a 1Amp fuse and an isolating switch to a nominal +12V DC supply. The green wire should be connected to power supply -ve.

Stand-alone operation of 40cm tubes

If ICELED data is present when the tube is powered it will produce the colours commanded by the controller. If no data is present when the power is applied, the tube will start running an internal programme designed to provide as much functionality as possible with only the interruption of the supply voltage as a control system.

The built-in programme runs through the four phases labelled A to D in the following diagrams:



Phase	Description
A	Rapid fade-up to peak intensity white after connection to the power source
B	Hold on peak white
C	Gentle transition from peak white to the colour change phase
D	Colour phasing - cycles seamlessly through the visible spectrum until power disconnected

Freezing the colour: The stand-alone programme may be halted at any time by briefly switching the power supply **off** and then back **on** again (within less than a second). This simple action allows the light source to be frozen on any particular colour (or white) just by toggling the switch controlling power to the device.

A single flash from the LED's provides acknowledgment that the freeze command has been accepted.

Un-freezing: The light source will remain frozen on the chosen colour until the next time it is switched off. Once again, if the supply is interrupted for less than a second, the programme will resume from where it left off (acknowledged by two flashes) If switched off for any longer, the programme will resume from the start the next time the tube is powered up.

Specifications

Nominal supply voltage:	12 Volts DC ⁽¹⁾
Maximum current drain:	0.3 Amps/35cm section
Typical current drain:	0.15 Amps/35cm section
Beam angle:	120 degrees
Data accepted:	UFO tube segment or Global ICELED ⁽²⁾

⁽¹⁾ On-board current regulation guarantees that Tubes operate consistently at peak intensity over a wide supply Voltage range of between 8 and 18 Volts. Brief surges to 24 Volts can also be tolerated. Reverse polarity protection is built in.

⁽²⁾ ICELED Tubes contain three independent colour pixels per 35cm section. UFO controllers produce data capable of addressing up to 12 of these pixels, on each of the four main outputs. When receiving Global ICELED data all pixels in the tube light in the same colour.

Additional resources

To see the full ICELED product range visit <http://www.iceled.co.uk> - the official ICELED website.

For interactive help and advice visit <http://iceled.co.uk/area51/> - the official ICELED user forums.

ICELED TUBE Conforms to:
EMC Directive (2004/108/EEC)
