

ICELED

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 LTD. WILL NOT ACCEPT ANY RESPONSIBILITY FOR ISSUES ARISING FROM ANY FAILURE TO COMPLY WITH THIS CLEAR INSTRUCTION.

ICELED LTD. 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 & CENELEC 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 also divided into 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. Tubes are available in different lengths ranging from one to four feet.

Uses

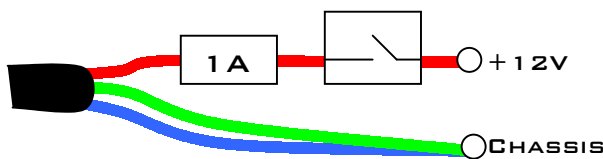
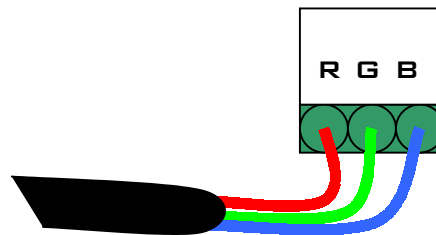
Tubes can be connected to ICELED controllers such as UFO or, in the case of the shortest one-foot length, will also function in a useful stand-alone mode allowing them to be used with nothing more than a 12 Volt supply. This makes the one-foot tube a direct replacement for neon in many applications –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

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.



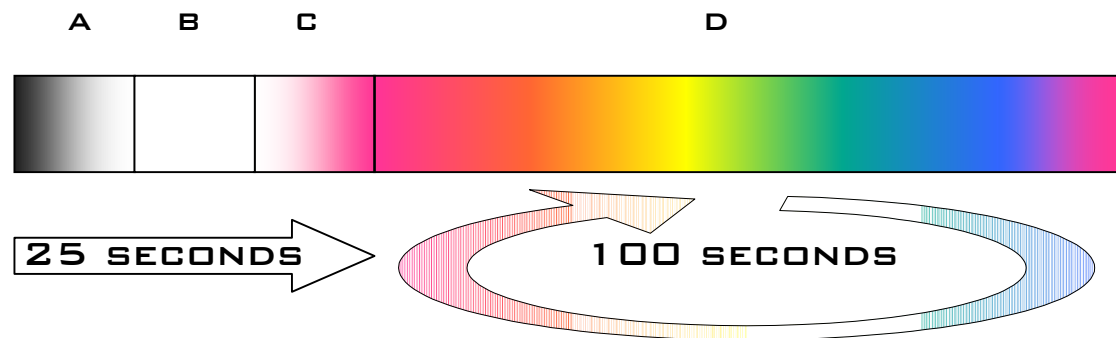
If the tube is a one-foot section used in stand-alone mode then the red wire must be connected via a 1Amp fuse to a nominal 12 VDC supply via a switch. The green and blue wires should be joined together and connected to chassis.

It is still possible to connect *just* the data wire to an ICELED controller (if for example, it was required to power the tube from another circuit like an interior lamp, but to have colours synchronise with other controlled light sources). In this case just the blue wire would be run to the corresponding controller terminal.

Stand-alone operation of one-foot 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 At any time, the programme may be halted by briefly switching the power supply off then back on (within less than a second). This simple action allows the tube 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 this command has been accepted.

Un-freezing The tube 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 it is powered up.

Specifications

Nominal supply voltage:	12 Volts DC ⁽¹⁾
Maximum current drain:	0.3 Amps/foot length
Typical current drain:	0.15 Amps/foot length
Beam angle:	30 x 75 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 foot length. UFO controllers produce data capable of addressing these on the four main outputs. When receiving Global ICELED data all pixels in the tube light in the same colour.