

ICELEDTM

ELECTRO STYLING

MATRIX INSTALLATION GUIDE 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 THE DRIVER OR 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 MATRIX is a compact digital light source capable of emitting an extra wide beam in any of over two million different colours. Full colour mixing is obtained using second-generation integrated RGB LEDs which eliminate colour shadowing and make the source suitable for direct viewing at a safe distance. MATRIX has been designed to complement and integrate with other devices in the ICELED range of networked lighting products and can be connected directly to controllers such as UFO, ZEN and ZAP. It can also function in a useful stand-alone mode allowing it to be used with nothing more than a 12 Volt supply. This makes MATRIX a direct replacement for neon and incandescent lighting in many applications – with the added advantage of being able to produce almost any colour in the visible spectrum. As an additional advantage *monobloc* construction makes MATRIX fully waterproof and capable of withstanding permanent immersion.

Feature summary

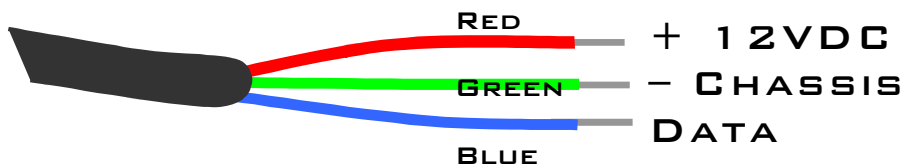
- Extra wide beam
- Two-million colours
- No colour shadowing
- Directly viewable
- Compatible with all ICELED controllers
- Fully waterproof

Installation

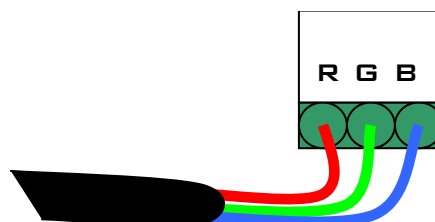
MATRIX may be attached to any flat surface using the adhesive pad on the back of the unit. The surface **must** be clean and dry prior to application of the adhesive pad. It is therefore advisable to de-grease the surface with Isopropyl Alcohol or similar to obtain the best bond (making sure to observe proper usage instructions for the cleaning agent used). Firm hand pressure must be applied for at least 30 seconds in order to ensure proper adhesion. Maximum strength will be obtained after 12 hours.

Wiring to ICELED controller

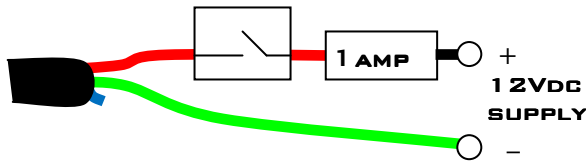
A standard three-core cable connects the device to a power supply and ICELED data source.



If the light source 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.



Wiring for stand-alone use



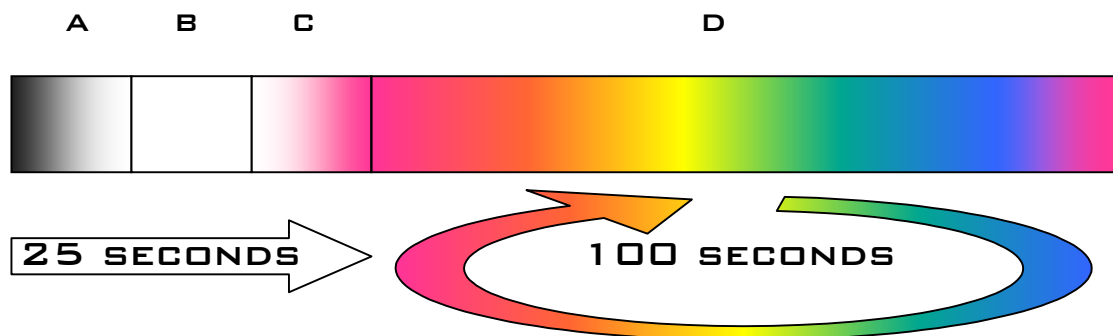
If the light source is to be used without an ICELED controller the red wire must be connected via a switch to a **fused power supply** as shown to the left. The green wire should connect to the negative or chassis return for the battery.

In stand-alone mode the unused blue wire must be left unconnected. It is advisable to tape over the end of the wire or cut it back flush with the outer cable sheath.

Stand-alone operation

If ICELED data is present when the device is powered-up it will produce the colours commanded by the controller. If no data is present when the power is applied, MATRIX 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 stand-alone 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 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 it is powered up.

Specifications

Nominal supply voltage:	12 Volts DC ⁽¹⁾
Maximum current drain:	0.25 Amps
Typical current drain:	0.1 Amps
Max. power consumption:	3 Watts
Beam angle:	120 degrees
Data accepted:	Global ICELED or UFO tube segment 0, pixel 0 ⁽²⁾
Environment:	IP68
Dimensions:	W 50mm, L 50mm, H 15mm

⁽¹⁾ On-board current regulation guarantees that the light source operates consistently at peak intensity over a wide supply range of between 8 and 28 Volts. Brief surges above this range can also be tolerated. Reverse polarity protection is built in. *Use in 24V electrical systems may be restricted to standalone mode as ICELED controllers are currently only available for operation at 12V.*

⁽²⁾ UFO controllers produce Global ICELED data that complements the tube data.

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 MATRIX Conforms to:
EMC Directive (2004/108/EEC)
