



Installation and setting instructions

LED Illuminators

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Important

These instructions must remain with the product to ensure correct installation. If extra copies are required please contact Dewhurst plc and quote publication number and issue

If you have any problems or questions, please contact our technical support desk direct on **+44 (0)20 8607 7322/7383** during office hours.

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TECHNICAL AND INSTALLATION DETAILS OF L.E.D. ILLUMINATORS

This range of LED illuminators consists of 2 LED and 3 LED variants suitable for US81, US82, US84, US85, US89, US90, US91 and US91-15 pushbuttons and illuminator ranges. Please refer to specification sheets, Publication PB026 (Original) or PB123 (Compact 2), for the full range of voltage and colour specifications.

(Note: Compact 1 illuminators are not covered by this document).

2 LED "Single" Intensity Illuminators:

The **2 LED units** replace all the existing range of illuminators, such that the units are polarised and are suitable for use in a.c., d.c. and multiplexed applications. They are available in **Original** and **Compact 2** forms.

The three main **Original** variants are **12V, 24V, 20mA** where:

- the 12V may be used up to 15V continuous
- the 24V may be used up to 30V continuous
- the 20mA device is for use with a multiplexed current limited controller (maximum currents: 20mA average, 125mA peak)

Terminals on the 2 LED "Original" type are two commoned 6.25mm (1") spade terminals for both + and - to allow "daisy-chain" circuit connections.

The four main **Compact 2** variants are **12V, 24V, 110V** where:

- the 12V may be used up to 15V continuous
- the 24V may be used up to 30V continuous
- the 110V may be used up to 126V continuous
- the 20mA device is for use with a multiplexed current limited controller (maximum currents: 20mA average, 125mA peak)

Terminals for the 2 LED Compact 2 type are a snap fit into the Compact 2 body, which provides contact with the two commoned 6.25mm (1") spade terminals.

Other versions may be available as specials, please refer to Publication no: PB026 or PB123 , or contact the Dewhurst sales office.

All devices may be multiplexed, that is driven by a pulsed supply, such that the average current does not exceed 20mA and peak current does not exceed 125mA. Detailed pulse width against pulse amplitude derating factors are similar to other DHAIGaAs LED's.

3 LED "Dual" Intensity Illuminators:

The **3 LED units** are introduced to allow a simple solution to the increasingly popular dual intensity illumination scheme. The "DIM" illumination is provided by the third LED, and the "FULL" illumination by all three LED's at once. The "FULL" terminals supply the 2 main LED's.

3 LED Dual illuminators are available in **Original** and **Compact 2** forms.

The three main **Original** variants are **12V, 24V, 20mA** where:

- the 12V may be used up to 15V continuous
- the 24V may be used up to 30V continuous
- the 20mA devices are for use with a multiplexed current limited controller (maximum currents: 20mA average, 125mA peak).

These units have four 6.25mm (1") terminals on the illuminator assembly, i.e. separate + and - for both dim and full circuits, requiring the use of "piggy-back" connectors to "daisy-chain" the illuminators.

The three main **Compact 2** variants are **12V, 24V, 20mA** where:

- the 12V may be used up to 15V continuous
- the 24V may be used up to 30V continuous
- the 20mA devices are for use with a multiplexed current limited controller (maximum currents: 20mA average, 125mA peak)

These units have a pair of 6.25mm (1") terminals on the rear of the illuminator board for the dim circuit. The Full circuit is as standard, with two commoned 6.25mm (1") spade terminals attached to the Compact 2 body, connected when the illuminator clips into the body.

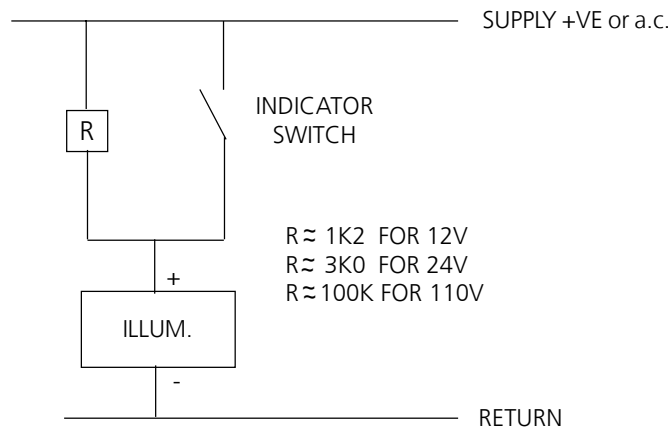
All 12V and 24V versions above are installed simply, where the "DIM" condition is driven by 12V and 24V respectively. However the 20mA version must have the "DIM" driven from 24V.

WARNING: If 12V or 24V is connected to the "FULL" terminals of the 20mA units the main LED's will be permanently damaged.

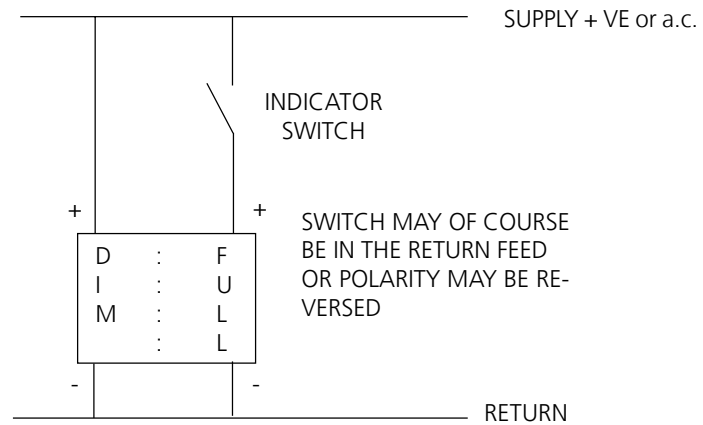
Consumption: The 12V and 24V units consume nominally 20mA in both "FULL" and "DIM" circuits (if fitted).

APPLICATION INFORMATION

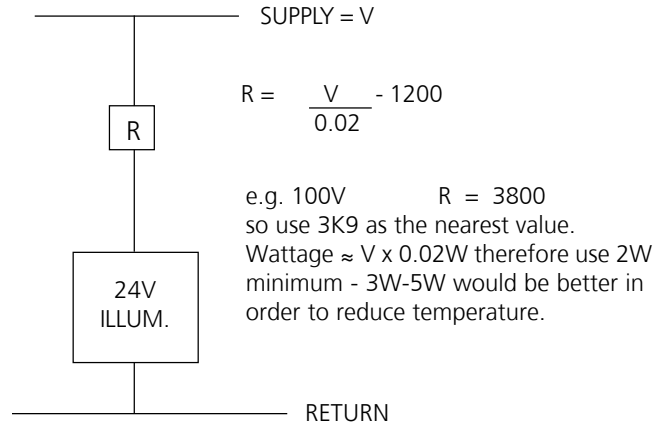
1) Dimming a 2 LED Indicator



2) Using a 12V or 24V 3 LED Indicator



3) Using with >24V Supplies - (must use 24V illuminator)



4) Multiplexed Indicators

