

Lascaux Luminaires and Magnifiers

Elsec UV Light Monitor 765

- Low Level
- Auto Range
- Digital Display
- Portable, small size
- Battery or Mains
- Measures Proportion of UV
- Measures Total UV
- Measures Visible Lux
- Measures Relative Humidity
- Measures Temperature
- Simple push button operation
- Optional computer output

The Elsec UV light monitor 765 is the latest development in UV measurement. Microprocessor technology is used to give improved accuracy and more information than earlier instruments.

Using the 765 measurements can be taken of the proportion of UV present ($\mu\text{W}/\text{lumen}$), the total amount of UV (mW/m^2), the amount of visible light present (Lux) and % of relative humidity. The 765 will also measure temperature in Centigrade or Fahrenheit. Earlier instruments would only measure $\mu\text{W}/\text{lumen}$. Operation is very simple, the appropriate button is pushed depending on the measurement required and the reading is taken. The unit automatically turns off 10 seconds after the button is released unless the CONT button is used to set continuous measurements to be displayed until another button is pressed. The damage is done by the total amount of UV falling on the object so it is useful to be able to measure this directly, especially if non-standard amounts of illumination are required. The amount of UV should be as little as possible but in general should not exceed $20 \text{ mW}/\text{m}^2$.

Traditionally UV has been measured in museums as the proportion of ultraviolet present. This result is useful for checking a particular lamp or window because the proportion of UV does not change with the distance from the light source. Using a simple rule, the amount of UV on an object can be limited (it is usual to arrange that the proportion of UV should not exceed $75 \mu\text{W}/\text{lumen}$ in museums).

A Lux readout is provided to control illumination and limit damage done by visible light. Normal museum light levels should be limited to 150-250 Lux.

Once measurements have been made the light level can be altered if necessary and UV filters can be fitted on windows, fluorescent tubes or other UV producing light sources as required. These filters often deteriorate over a period of years so it is essential to

recheck them periodically.

Specifications

Method of radiation detection: Twin silicon photodiodes connected to single chip microprocessor.

Visible wavelength range: 400 - 700 nM (CIE response)

Visible power range: 1 - 200,000 Lux

UV wavelength range: 300 - 400 nM

UV power range: 2 - 50,000 mW/m^2

UV proportion range: 0 - 10,000 $\mu\text{W}/\text{lumen}$

Display resolution

Lux: 0.1 up to 100 then 1 Lux

UV: 0.1 up to 100 then 1 mW/m^2

Proportion of UV: 1 $\mu\text{W}/\text{lumen}$

Temperature: 0.1°C or 1°F

RH: 0.1

Measurement

Lux: $5\% \pm 1$ displayed digit

UV: $15\% \pm 1$ displayed digit

Temperature: $\pm 0.5^\circ \text{C}$

Angular response: Cosine

Readout: 8 character alphanumeric Liquid Crystal Display

RH: $\pm 25\%$

Computer Interface

RS-232 compatible serial, 9 pin D female socket.

An optional RS-232 computer interface allows connection to any computer. Microsoft Windows software is provided that allows the display and storage of UV, Lux and temperature results. A real time graph of the readings can be shown on screen. Use of this software does not prevent the computer being used for other purposes at the same time.



Battery

Alkaline or mercury 8-9V PP3 type.

For example Mallory TR146X, Duracell MN1604

Battery life is approx. 100 hours continuous use or

12,000 readings taking 30 seconds each. Battery life

will be less if connected to a computer, an external

power supply is recommended if this is to be done for extended periods.

External Power Supply

4.0 – 5.2 V DC, 100mA. A suitable mains power supply can be provided as an optional extra (please specify mains voltage required).

Operating Temperature: 0° - 50° C

Dimensions: 150 x 65 x 25 mm

Weight: 165 g

Thermometer Strip RTS

The reversible, flexible and self-adhesive RTS strip carries levels rated at 50°/55°/60°/65°/70° C.

Shown actual size: Thickness 0.1 mm



Temperature under 50° C



Temperature at 60° C, not over 65° C

50	50	50	50	50	50	50	50	50	50	50	50
55	55	55	55	55	55	55	55	55	55	55	55
60	60	60	60	60	60	60	60	60	60	60	60
65	65	65	65	65	65	65	65	65	65	65	65
70	70	70	70	70	70	70	70	70	70	70	70

The backing sheet contains 20 identical RTS strips ready to peel off.

Disclaimer:

The information provided above is given to the best of our knowledge and is based on our current research and experience. It does not absolve the artist from the responsibility of first testing the suitability of our products for the substrate and specific use conditions he or she has in mind. This technical sheet will become invalid with any revised edition. The latest update is always found on our website.