



The Universal Light Meter is a hand-held instrument designed to measure Lux and UV and display the readings (including calculated cumulative exposures where applicable) in an easily understood format. Temperature and humidity measurement is available as an optional extra. The ULM can also be used as a stand-alone Lux and UV datalogger, with 8k of on-board memory. Fully featured PC software is included with the package. Easy access to all functions is given by an on screen-menu.

The ULM has internal auto-scaling across the ranges 10 to 20,000 Lux and 10 to 1,000  $\mu\text{W}/\text{Lumen}$ . In the normal mode of operation it displays light levels on its alpha-numeric LCD screen as Lux,  $\mu\text{W}/\text{Lumen}$  and  $\text{mW}/\text{m}^2$ . Lux is detected by a photometric diode and UV by a UV-enhanced silicon photodiode fitted with a hard UV filter material which provides a response over the range 250 to 400nm. The sensors are mounted adjacent to each other, with cosine-correction of both Lux and UV.

Logged data can be downloaded and stored on a PC using fully featured Windows based software using the RS232 serial communications lead.

The software allows the user to create a chart displaying the measurements taken. The software can also rapidly generate reports displaying the

maximum, minimum and cumulative Lux and UV levels over a time period. Data from up to three other Hanwell sensor units can be overlaid to allow quick comparison. The software is compatible with other Hanwell monitoring systems, allowing data from different Hanwell products to be compared. Data can also be exported in an ASCII format to other Windows programs such as Excel.

## Universal Light Meter

**Product Code** ULM  
**Series** Light Meter

### Typical Applications

- ° Discreet logging in showcases
- ° Monitoring in galleries
- ° Monitoring in archives
- ° Monitoring in museums
- ° Monitoring in libraries
- ° Monitoring in storage rooms
- ° Travelling exhibitions
- ° Ageing tests

### Instrument

**Dimensions:** 170 x 85 x 35 mm  
**Weight:** 400 grams  
**Power Supply:** Disposable pp3 9 volt battery  
**Case Materials:** Black ABS  
**Angular Response:** Cosine  
**Record Capacity:** 1984 records  
**Memory:** 8k EEPROM

### Sensor Lux

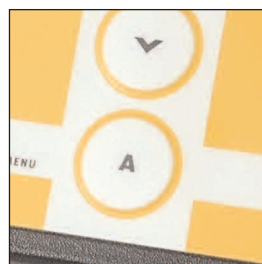
**Dimensions:** 33 mm diameter x 22 mm deep  
**Type:** Photometric diode detector  
**Visible Wavelength:** 400 to 700 nm  
**Visible Power:** 10 to 20000 lux  
**Colour Response:** Human eye  
**Lux Accuracy:** +/- 1%

### Sensor UV

**Dimensions:** 33 mm diameter x 22 mm deep  
**Type:** UV enhanced silicon photodiode  
**UV Proportion:** Greater than 10  $\mu\text{W}/\text{Lumen}$   
**UV Power:** 0 to 8000  $\text{mW}/\text{m}^2$   
**UV Wavelength:** 250 to 400 nm  
**UV Accuracy:** +/- 1% (calibration spectrum)

### Communications & Software

**PC Interface:** Serial cable  
**PC Software:** ULM  
**Minimum O/S:** Windows 2000  
Windows XP  
Windows NT



Close up of touch pads



LCD display



Lux/UV sensor