

## UV Integrator 160

- + UV-intensity  $mW/cm^2$
- + UV-dose  $mJ/cm^2$
- + selectable "triggered mode"\*
- + LCD display
- + temperature  $^{\circ}C/^{\circ}F$
- + SD Memory Card Slot
- + graphic chart on PC
- + real-time clock
- + re-chargeable accu cells



The UV Integrator 160 is a small, self-contained, high quality UV measuring instrument. It is designed to measure and display peak UV intensity in  $mW/cm^2$ , UV dosage in  $mJ/cm^2$  and temperature in the UV curing process.

In the standard version it is equipped with one UV sensor and one temperature sensor for the measuring of:

**Full UV 230 – 410 nm  
Temp 32 to 230° F / 0 to 110° C**

With this total UV band peak energy and dose measuring, most of the measuring requirements of UV curing applications can be covered.

Due to its UV sensor and the integrated microprocessor the UV Integrator 160 can measure and display the peak UV-intensity of the total UV spectrum ( $mW/cm^2$ ).

Additionally, this UV-measuring instrument is calculating the UV-dosage ( $mJ/cm^2$ ) of the UV energy supplied during the time of exposure of one measuring cycle. The UV-dosage is calculated as the total Integral of UV-dosage over the full UV spectral bands.

An extra sensor is measuring temperatures from 32 to 230° F / 0 to 115° C.

The sensors are on the back of the unit which also serves as a heat shield. After completion of the measuring cycle the measuring results can be scrolled through on the built in 2 x 16 digit LCD display.

\*This Integrator features a selectable „triggered mode“, i.e. the 90 sec recording cycle starts within a 120 second readiness phase not before the incident UV-intensity exceeds 2  $mW/cm^2$ .

This microprocessor integrator is additionally equipped with an SD Memory Card Slot. All measuring data are stored on an SD-Memory Card and can be downloaded to a computer. The special evaluation software allows to show, edit and store a history of the measuring results of the entire measuring cycle as graphic and numeric charts ( $mW/cm^2$ ), ( $mJ/cm^2$ ) and ( $^{\circ}C/^{\circ}F$ ).

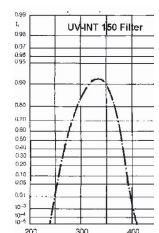
A special AUTO-OFF feature that turns off the unit automatically after one minute serves as energy saving and extension of the battery service life.

The UV Integrator 160 is available in various different measuring ranges\*:

(Please state upon order)

Item 48.2.1 UV Integrator 160, Type 1 Diazo	350 – 460 nm + Temp
Item 48.2.2 UV Integrator 160, Type 2 UV-A	315 – 410 nm + Temp
Item 48.2.2.1 UV Integrator 160, Type 21 UV	380 – 420 nm + Temp
Item 48.2.3 UV Integrator 160, Type 3 UV	230 – 410 nm + Temp
Item 48.2.4 UV Integrator 160, Type 4 UV-B	280 – 315 nm + Temp
Item 48.2.5 UV Integrator 160, Type 5 UV-C	230 – 280 nm + Temp
Item 48.2.6 UV Integrator 160, Type 6 UV-V	395 – 445 nm + Temp

In the standard version it is measuring an integral in the spectral range from 230-410 nm, with a peak at the area of 330 nm.



## UV Integrator 160

### Technical Data:

Spectral range:	UV 230 – 410 nm (Standard)
Max. Power Input	0 to 5,000 mW/cm <sup>2</sup>
Display:	LCD, 2x16 digits
Display range:	0 to 36,000 mJ/cm <sup>2</sup>
Measuring range:	0 to 2,000 mW/cm <sup>2</sup>
Measuring temperature:	32 to 230° F / 0 to 115° C
Sampling rate:	0.01 sec (100/sec)
Recording cycle:	90 sec.
Readiness phase:	120 sec.
Power source:	3.7 V accu, re-chargeable
Power consumption:	40 µA
Battery service life:	approx: 500 charges
Dimensions:	140 x 65 x 13 mm (5.5 x 2.7 x 0.5")
Weight:	approx. 9 ounce (280 g)
Operating temperature:	32 to 113° F / 0 to 45° C
Heat protection:	Heat shield on back plate
Base Accuracy:	± 5 %

While on the conveyer belt, the UV Integrator 160 can withstand max. 230° F / 110° C for up to 10 seconds. The temperature of the housing should not exceed 113° F / 45° C.

Because of uneven radiation distribution of the UV light source and different type of construction of the measuring devices by different manufacturers, different readings may appear under the same measurement conditions.

### Calibration:

In order to keep its full function and precision it is recommended to have re-calibration done once per year. Re-calibration will also be necessary after change of battery. PTB traceable calibration acc. to DIN EN ISO / IEC 17025 with certificate

### Graphic Chart:

With SD Card slot.  
Stores data to an SD-Memory card  
For transmission to a computer

