

# Sola-Check

**solatell** 

## User Programmable UV/Near Visible Radiometer

Incorporating Solatell® spectroradiometer optics for high accuracy

- Go / No Go warning lights
- Comparison with user selected reference lamp
- User selectable wavelength ranges between 235nm and 470nm
- Absolute radiometric readings
- Closed loop control outputs
- Upgradeable to Sola-Scope 2000

### SIMPLICITY

Inexperienced users are able to quickly and simply assess the state of their UV lamps. Obtaining accurate UV radiometric data is as simple as a single press of the sample button. Data is displayed as a large number or as a comparative bar chart, with a green, amber or red LED indicating the curability state of the lamp.

### EASE OF USE

Changing the wavelength ranges and the alarm levels is via an easy to use 4 key simple to use user interface. Storing a new reference reading requires only 2 key presses.

### ACCESS TO UV LAMP

Positioning the Sola-Check is made easy with the large selection of attachments, smart probes and probe positioner kits. SOLATELL LTD have a wealth of experience accessing most UV lamp systems on the market today.

### POWERFUL UPGRADE CAPABILITIES

The Sola-Check can be upgraded to become a full spectroradiometer with the addition of a Sola Scope 2000 user-interface. Multiple Sola-Checks can also be networked, used on-line for continuous monitoring and used for closed loop control.

### TRAINING AND TECHNICAL SUPPORT

With its minimum training requirement, the introduction of the Sola-Check requires negligible disruption of staff and production time. Technical support from our team of UV measurement experts is available via telephone or e-mail.

### CAPABILITIES

- Calibrated, absolute measurement
- Calibration traceable to National Physical Laboratory (UK)
- Designed to be positioned for continuous monitoring
- User defined alarm level to warn when intensity of lamp dips below pre-set levels
- Closed loop control capabilities
- Stores a measurement spectra for reference
- Compares two measurements
- Connects to Sola-Scope 2000 for full spectral measurements
- Multiple Sola-Checks can be networked

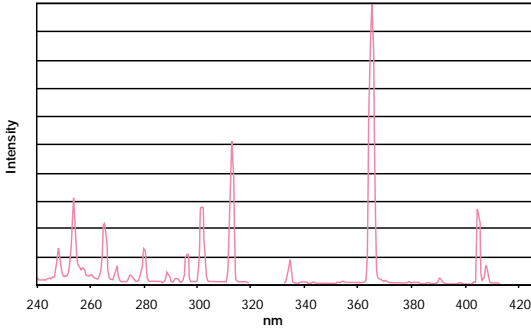


*curing your UV problems*

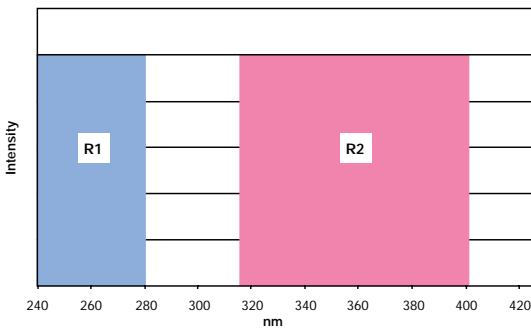
## EXPLANATION OF DATA PROCESSING

### Display Information

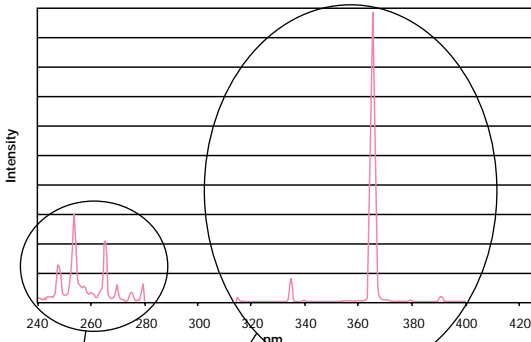
Full spectral scan data collected by Solatell technology  
(as viewed by Sola-Scope)



### User defined ranges applied to data



### Total intensity within ranges calculated



<b>1.23 mW/cm<sup>2</sup></b> Range 1,240-280nm	<b>4.56 mW/cm<sup>2</sup></b> Range 2,315-400nm
<b>Ratio = 0.27</b> Range 1/Range 2	

Final data prepared for display  
viewed by simple scroll through  
radiometer mode

PLEASE CALL TO DISCUSS YOUR REQUIREMENTS, OR FOR  
MORE INFORMATION ON OUR EXPANDING RANGE OF PRODUCTS

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## ORDERING INFORMATION (example only)

Type	Code	Description
Sola-Check	<b>SOL-CH10</b>	Standard instrument
Light Reducer	<b>R101</b>	Used with higher powered lamps e.g. >100mW/cm <sup>2</sup>
Fine probe	<b>PFP300</b>	300mm long light collector, 4.8mm diameter
Probe positioner kit	<b>ADFT11/1 2</b>	Accurately positions probe in UV oven

## SPECIFICATION

### Optics

General description Single grating spectrograph optimised for Ultra Violet Spectroradiometry using patented Solatell® monolithic optics, with 512 pixel UV enhanced detector array.  
Cosine response UV diffuser. 10 mm dia.  
235 nm to 470 nm  
Spectral sampling 0.5 nm  
Bandwidth 1nm (+ 0.5 nm /- 0 nm)  
Sensitivity < 10nW/cm<sup>2</sup>/nm, without light reducer  
Dynamic range > 10<sup>7</sup>  
Stray light rejection ratio > 10<sup>3</sup>  
Stray light rejection software compensation enhances straylight rejection further

### Mechanical

Construction Non-slip, tough ABS combined with aluminium housing  
Dimensions 118 x 69 x 32 mm  
Environmental IP55, standard.  
Temperature range - 20 °C to +70 °C storage  
- 10 °C to +50 °C operating  
+ 15 °C to +30 °C full spec  
Humidity 0 to 80 % non condensing

### Electrical

Connector Fischer 5-way female, sealed to IP68 connecting to 4-way screened cable  
Connections 0 V; +5 V dc in; RS485-A/TXD; RS485-B/RXD; EXT  
Power requirement a) Internal 3V NiMH sealed battery pack  
b) External +12V d.c. power supply (supplied) or  
c) +5 V dc; +/-5 %; 35 mA supplied by Sola-Scope 2000 viewing station if fitted  
Data comms. a) RS485 serial asynchronous data at 250k Baud  
b) RS232 serial printer driver  
Processor Siemens C509L running at 6MHz  
A to D conversion 10 bit  
Temperature sensor Linear semiconductor, accurate to 2 °C  
Visible sensor (optional) Provides waveform analysis

### User Interface

Sample time Auto Ranging and Smart-Scan™  
Display 32x97 pixel graphical display plus icons for charge state, memory, signal and real-time clock  
Keypad Seven button membrane tactile, sealed keypad

### I/O connector

Solenoid driver SOLDRV, 0v  
Thermocouple input THERM+, THERM-  
Analogue input SENS+, SENS-  
Analogue outputs AOUT1, AOUT2  
Coin 2 COIN2+  
Serial 2 RXD2, TXD2

### Note

Due to have Solatell Ltd policy of continuous product improvement, specification is liable to change without notice. Please consult your supplier, or Solatell Ltd direct for clarification if necessary.

Patents granted or pending on Solatell technology in more than one country.

### Warranty

All Solatell products are guaranteed to be free from manufacturing defects for a period of 1 year from date of purchase.  
As a general measuring instrument, Solatell Sola-Sensors require periodic recalibration, usually annually.