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Find the *Solatell Sola-Scope 2000* at our website: *Click HERE*

Sola-Scope™ 2000

solatell®



The worlds most powerful handheld spectroradiometer

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Sola-Scope 2000™

Measuring UV has never been so easy. Accuracy, flexibility and ease of use were the prime aims when developing the latest generation of award winning *Solatell*® instruments.

Providing spectroradiometric and programmable radiometric readings in a handheld and robust instrument, the *Sola-Scope 2000*™ offers clear and easily interpreted data on both the intensity and wavelength of a UV source.

The ***Sola-Scope 2000™*** has four operating modes:-

- **Spectro Mode**
  - spectroradiometer displayed as two colour line graph
- **Bar Mode**
  - spectroradiometer displayed as two colour bar chart
- **Radiometer Mode**
  - User-defined wavelength range absolute radiometer displayed as large numbers
- **Relative Mode**
  - User-defined wavelength range relative radiometer displayed as large numbers

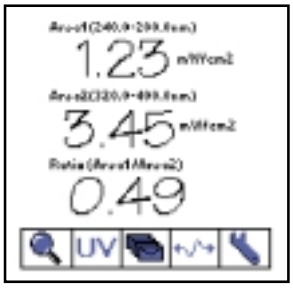
A highly flexible tool, the *Sola-Scope*™ can be used as a single key operation radiometer yielding a straightforward large number screen output of UV analysis on the shop floor, or as a sophisticated, high powered analysis tool giving detailed graphical analysis frequently required by laboratory or research staff.

Simplicity

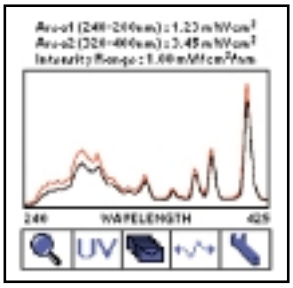
Inexperienced users are able to obtain accurate data immediately with the *Sola-Scope 2000*™ as the designers have incorporated dynamic range enhancement software *Smart-Scan*™ and full scale deflection *Auto-Scan*™ software. All that is required is a simple press of the sample button. *Smart-Scan*™ was developed to sample all intensities of UV with the same high accuracy. *Auto-Scan*™ automatically assesses the lamps' intensity and thereby selects the appropriate sample time.

Ease of use

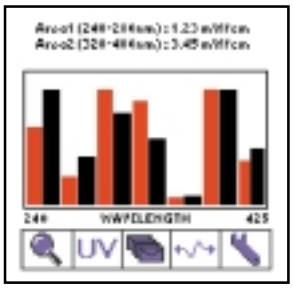
The *Sola-Scope 2000*™ has context sensitive on-screen help and an icon-based user interface. The anti-reflective colour screen is easy to view with large numbers and script. Screen updating is fast so there is no waiting around for the latest sample data.



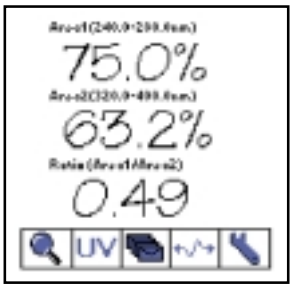
User-defined wavelength range absolute radiometer displayed as large numbers



Spectroradiometer displayed as two colour line graph



Spectroradiometer displayed as two colour bar chart



User-defined wavelength range relative radiometer displayed as large numbers

Lots of storage

There are 90 file areas to store data, file naming capabilities and a real-time clock, enabling stored data to be labelled and time and date stamped. The *Sola-Scope*™ can be set to auto-save each time a reading is taken. This also allows time related profiling when the *Sola-Scope*™ is run in continuous mode.

PC Compatible

Sample data can be uploaded to a PC via the built in communication link. When used with PC based *Sola-Term 2000*™, PC triggered scans can be automatically uploaded into a spreadsheet, as can continuous samples.

Training and technical support

With its minimum training requirement, the *Sola-Scope 2000*™ ensures negligible disruption of staff and production time. Technical support from our team of UV measurement experts is available via telephone or e-mail for registered users.

Advanced Features

A host of advanced features are provided.
These include user definable calibration, PC triggered scans, continuous sampling and auto-save.

Winner of many prestigious awards including:-
Metrology Award for World Class Manufacture, National Physical Laboratory Prize for Measurement, Regional Winner of ***Best Small International Business*** and several Dti SMART awards including the ***SMART Achievement Award.***

Customer Comments:-

"Your level of service has been outstanding"
- Trojan Technologies Inc.

"Thank you for your fast response"
- Congoleum Inc.

"Extremely useful instrument"
- Jenton International.

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Capabilities

Radiometer - In this mode the *Sola-Scope*™ becomes a highly accurate radiometer measuring UVA and UVC. Changing the default wavebands is simple and this mode can be set to read ANY two regions of the UV spectrum. The programmable radiometric values are shown as big, easy to read numbers on the display in absolute power levels.

Spectroradiometer - The *Sola-Scope*™ displays the spectral and intensity data in graphical form. The user can choose to view the data in line graph or bar graph format. Wavelength and intensity information is displayed.

Graph overlaying - Two graphs are displayed simultaneously in different colours to enable comparisons of two lamp measurements. The user can choose to use the previous or stored lamp data for visual and relative comparison.

Data logging - auto-save each time a reading is taken. This also allows temporal profiling when the *Sola-Scope*™ is run in continuous mode.

PC Interface - Fast RS232 upload feature of all stored and current sample data including date, time and intensity range for each sample. Download user calibration data. PC triggering for timed samples.

More features

- Support for multiple languages.
- 'Soft' keys and icon based user interface.
- 90 file areas.
- Operates *Mercury*™ *On-line Monitoring Probes*.
- Year 2000 compatibility.
- CE and EMC approvals.
- Slimline, custom designed, rugged case, sealed to IP55.
- High capacity rechargeable batteries allowing longer than 4 hours continuous use.
- An internationally compatible power supply.

Ordering Information

Type	Code	Description
Sola-Scope™	**SOL-SC2000**	Standard instrument
* Intelligent Light Reducer	**SOL-R101**	Extends instrument to measure high intensity lamps
* Intelligent Diffuser	**SOL-D10**	Cosine light collector for solar meaurements
* Intelligent Probe	**SOL-FGH135**	Light collector for difficult to access lamps - many lengths

* Intelligent attachments are optional extras.

Sola-Scope 2000 is:

- **Hand-held**
- **Easy to set up user defined radiometer mode**
- **Easy to read comparison mode**
- **Full spectral information**
- **Covers 230 nm to above 470 nm**
- **Intensities 10 nW / cm² / nm to 50 W / cm²**
- **Spectral sampling 0.5 nm Resolution 1nm typical**
- **Units - W / cm² / nm**
- **Auto data logging**
- **Customer technical hotline**
- **Calibration traceable to UK National Physical Laboratory (NPL)**
- **4 hours scan time**
- **20 hours standby**



The standard *Sola-Scope 2000 kit*™. A wide range of optional probes and accessaries are available.

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SPECIFICATION

All specifications quoted as typical at 21 °C

Viewing Station - Sola-Scope 2000™

Mechanical

Dimensions	196 x 100 x 38 mm
Weight	400 g
Construction	Non-slip, tough ABS
Temperature range	-5 to 40 °C
Humidity	0-90% non-condensing

Electrical

Processor	Siemens C509L
Power source	Internal: 4.8 v dc supplied by built in high capacity rechargable NiMH battery pack; External: +12 v dc supplied by an internationally compatible and approved power supply.
Power Management	Efficient power supply circuit, power supply supervisor, high speed charger circuit
Power indicator LED	Off-operating from battery only, Red - battery fast charging in progress from external supply; Green - trickle charging from external supply.

User interface

Keypad	Membrane keypad 12 tactile buttons
Display	High visibility colour 128 x128 pixel matrix liquid crystal graphical display with high speed controller

Interface connector

Type	Miniature 9-pin DIN for RS232, 7-wire serial port with *Solatell*® serial lead
Serial compatibility	IBM PC 9 pin serial / RS232 port
Baud rate	Software selectable to 115 k baud
Serial signals	RXD, TXD, 0 v, DTR, DSR, RTS, CTS
ESD protection	To 15 k v on all RS232 signals
Other signals	SOL-DRIVE (+12 v), SOL-FB

Sola-Sensor 2000™

Optics

General description	Single grating spectrograph optimised for Ultra Violet Spectroradiometry using patented Solatell® monolithic optics, with 512 pixel UV enhanced detector array.
Diffuser (optional)	Cosine response UV diffuser. 10 mm dia.
Wavelength range	230 nm to 470 nm
Spectral sampling	0.5 nm
Bandwidth	1nm (+ 0.5 nm /- 0 nm)
Sensitivity	< 10nW/cm^2/nm, without light reducer
Dynamic range	> 10^7
Stray light rejection ratio	> 10^3

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
Weight	274 g
Temperature range	- 20 ºC to +70 ˚C storage - 10 ºC to +50 ˚C operating +15 ºC 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	+5 V dc; +/-5 %; 35 mA supplied by Sola-Scope 2000™ viewing station
Data comms.	RS485 serial asynchronous data at 250k Baud
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

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

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

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http://WWW.SOLATELL.COM

NOTE

Due to 4D Controls Ltd policy of continuous product improvement, specification is liable to change without notice. Please consult your supplier, or 4D Controls direct for clarification if necessary.

Patents granted or pending on Solatell technology in more than one country. *Auto-Scan, Mercury, Smart-Scan, Solatell, Sola-Scope, Sola-Term* are all registered trademarks.

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-Scope* sensors require periodic recalibration, usually annually.

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