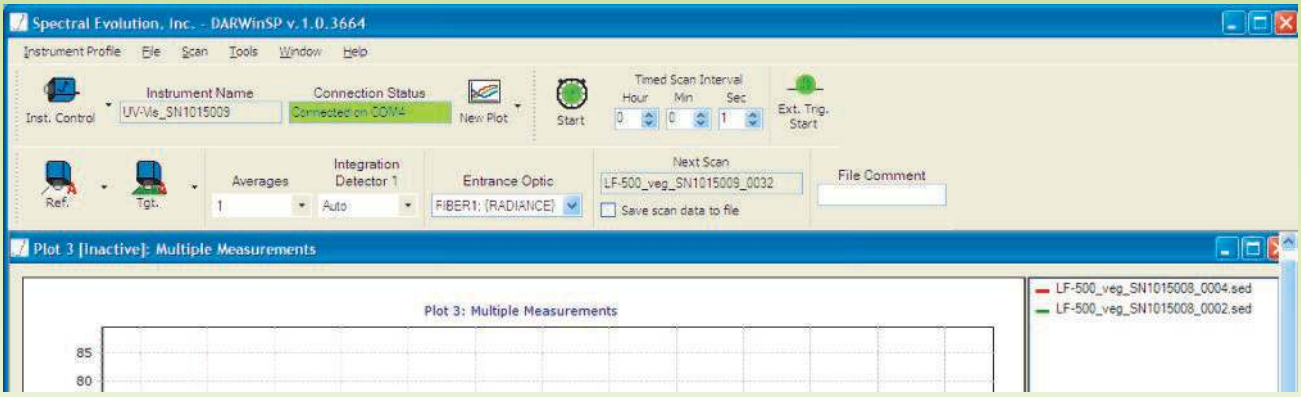
SPECTRAL EVOLUTION

DARWin SP Data Acquisition Module
Capabilities & Features

Only SPECTRAL EVOLUTION Spectrometers & Spectroradiometers offer the exclusive DARWin™ SP Data Acquisition Module software package– included free with every SPECTRAL EVOLUTION system!

Fast data processing- Right on your laptop!

SPECTRAL EVOLUTION Spectroradiometers and companion DARWin SP Data Acquisition Module are ideal for one-touch full-range spectroscopic analysis of samples. The screen shot (left) demonstrates some of the capabilities of these systems. In the top panel, transreflectance of a plastic film was measured using the PSR+ Portable Spectroradiometer with its included 4° lens foreoptic (blue trace). The same setup was also used to measure spectral radiance of the incident light from a halogen source (red trace). Each scan takes less than 1 second. The lower panel shows transreflectance of three different plastic films measured with the same system and displayed concurrently in a different window. Multiple scans may be viewed concurrently to speed comparative analyses.



Easy to use pushbutton console controls and pull down menus– Take measurements and analyze data in minutes!

DARWin SP Data Acquisition Module uses simple, intuitive pushbutton controls and pull down menus to achieve a broad range of operating modes and settings. For more info on capabilities, see back page ►

DARWin SP Data Acquisition Module Capabilities

Data Collection:

- Collect reference or target scan spectra with a single click
- Automatic shutter for dark compensation
- Automatic integration time adjustment for each detector, or user can set values manually
- User-selectable averaging
- User-selectable radiometric calibration for instruments supplied with multiple entrance optic accessories
- Instrument status displayed after each scan (voltage, temperature, scan title, etc.)
- Automatically saves spectra to text files for later retrieval
- Timed mode: spectra can be collected at user adjustable intervals from 1 second to 1 hour.
- Trigger mode: instruments equipped with external trigger inputs can collect data when receiving a trigger signal, with adjustable 0-50 ms delay

Plotting Data:

- Spectrometry - display reflectance/transmittance data (percentage) or absorbance (logarithmic) vs. wavelength
- Spectroradiometry - display spectral radiance or irradiance vs. wavelength, depending on entrance optic
- Two types of spectral plots available: single and multiple
- Single scan plot displays active spectrum (radiometric/ratio/both with separate y-axes), with or without the associated reference.
- Single scan plot also features a data table window with user-selectable columns (channel #, wavelength, radiometric/ratio values for both reference and active spectra)
- Table data can be easily copied to spreadsheet software
- Multiple scan plot displays numerous scans on the same axes; easily compare current scans against ones collected over an extended time period or archived data
- Calculate first and second derivatives
- Selectable plot lines highlight the corresponding legend items. Selectable legend titles allow you to hide/show/delete plot lines or copy them to new plot windows
- All plots have automatic or manual vertical scaling adjustment and axis limits
- Zoom and pan functionality. Single scan plots can zoom multiple y-axes together or independently
- Adjustable plot titles, axis labels, color palettes, line thickness and antialiasing
- Optional adjustable-width moving average filtering

Scan Information Window:

- Displays up-to-date instrument parameters (device ID, voltage, detector temperature readings)
- Displays current scan parameters (title, averages setting, integration settings, dark current subtraction mode)
- Spectroradiometry: integrated radiance or irradiance, with user-adjustable wavelength range and display units
- Photometry: luminance/illuminance
- Colorimetry: x',y' coordinates and correlated color temperature

Colorimetry Window:

- CIE 1931 chromaticity diagram with sRGB gamut
- Scan result displayed graphically with crosshair overlay
- Text display of x',y', XYZ and RGB coordinates and correlated color temperature

Solar Simulator Testing:

- IEC 60904-9/ASTM E927-05 table for comparison with AM1.5 Global Tilt standard,class grading for all wavelength bands

Additional Features:

- Pulldown access to 19 Vegetation Indices
- Access to USGS library
- Calculate first and second derivatives

Compatibility:

- Windows 7 and Windows 10

SPECTRAL EVOLUTION

26 Parkridge Road ◊ Suite 104
Haverhill, MA 01835 USA
Tel: 978 687-1833 ◊ Fax: 978 945-0372
Email: sales@spectralevolution.com
www.spectralevolution.com