SM-250 Hyper Monolight System

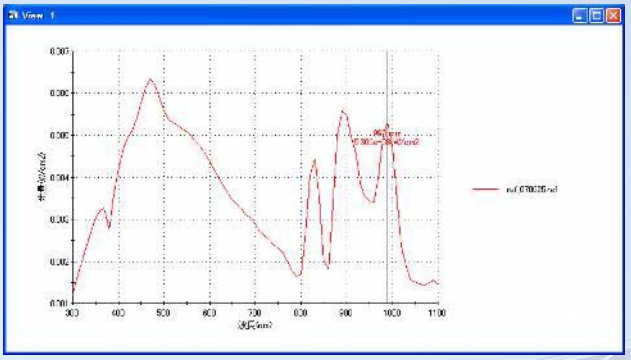
For Dye Sensitize/Organic Thin Film Solar Cells

*Actual appearance of the instrument is black

The current value of the sample is measured based on the measurement of the irradiation intensity (mW/cm2) at each wavelength of the valuated Si photodiode,
Using our dedicated software, spectral response or quantum efficiency of the various solar cells and opto electronic devices are automatically displayed.
Our unique xenon lamp optics and high efficient monochromator enables the system to offer high intensity monochromatic light irradiation (5mW/cm2) .
The SM-250 is the model suitable for measurement of the organic solar cells(dye sensitize/organic thin film solar cells)

■ Specifications

Measurement items	Spectra response, quantum efficiency
Wavelength range	300-1150nm(extended up to 2000nm as an option)
Light source	Xenon lamp 150W
Irradiation area	10x10mm
Wavelength purity	Variable, ca.24nm
Irradiation intensity	More than 5mW/cm2 (at around 470nm)
In-plane non uniformity	±5%（550nm）
Irradiation direction	Vertical, Horizontal (variable 360 °
Measurement mode	DC
Light intensity measurement	Si photo diode (with calibrated data of spectral response)



Measurement data of irradiation intensity

SM-250 spectral response measurement procedure

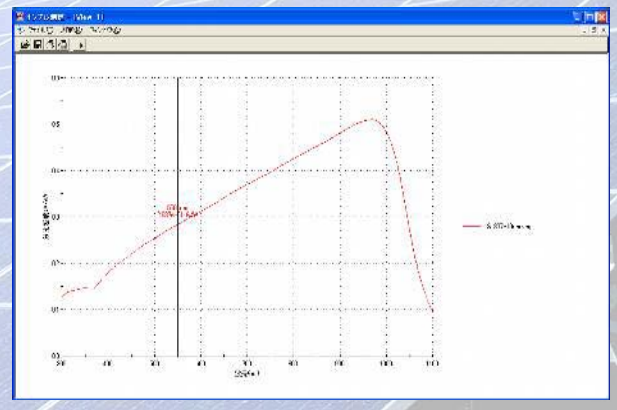
① Measure photo current placing Si photodiode detector.
I_R (A)

② Measure output of photo current of the sample.
I_S(A)

③ Spectral response of Si photo diode is expressed as SR_R(A/W). Spectral response of the sample SRR(A/W) is obtained through calculation between the files.

$SR_S(A/W) = I_R(A) \times SR_R(A/W) / I_S(A)$

Absolute value of spectral response is obtained by inputting the area coefficient.



Spectral response measurement data

*Specifications and appearance of the system are subject to change without prior notice.

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