

S-9001 , S-9011

HIDAMARI Prompt

● Standard Equipment

- Main Body
- USB Cable
- AC Cable
- Inspection Chart
- Software for Spectral Irradiance Measurement
- Reflecting Diffuser with Optical Fiber (L=1.5m)
- Trigger Cable (L=1.5m)

● Main Specifications

Model	S-9001/HIDAMARI Prompt	S-9011/HIDAMARI Prompt II
Wavelength	300~2000nm	300~1500nm
Slit Wavelength Width	5nm	
Exposure Time	1~1,000msec	
Incidence Optics	Reflecting Diffuser with Optical Fiber (L=1.5)	
Measuring Item	Spectral Irradiance ($\mu\text{w}/\text{cm}^2/\text{nm}$), Evaluation of Spectral match Standard of spectral match evaluation : (IEC 60904-9 (ED-2) -2007, ASTM (Direct AM1.5, Global AM1.5) -2009) JIS C 8912-2011, JIS C 8933-2011, JIS C 8942-2009	
Measuring Mode	Stationary measuring, Time resolving measuring, Repeat measuring Repeat measuring, Standard light source measuring	
Trigger Unit (Pulse light source measurement)	Built-in Spectroradiometer (Synchronized measuring by entering the timing signal (Photo diode attached to Reflecting Diffuser detect the	
Operation System	Windows XP/Vista/7 (Japanese Version 32bit, 64bit) (PC is not included)	
Interface	USB 2.0	
Data Format	CSV Text (1nm data step)	
Temperature and Humidity	10~35°C, Relative Humidity 80% or less / Non-condensing	
Power for Main Body	AC100V	
Size	340(H) × 280(W) × 460(D) / 15kg	340(H) × 280(W) × 460(D) / 14kg
Option	Reflecting Diffuser fixed unit (For upward for irradiation type of Solar Simulator)	

● The specifications and the outer shape would be changed without any notification.
● Color catalog and actual product may differ slightly in relation to print picture.

● For inquiries please contact

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High Speed Spectroradiometer

S-9001, S-9011

HIDAMARI Prompt

H I D A M A R I



Make it possible to track the spectral change of Pulse light continuously every 1msec !

Enable to measure wide range spectrum from 300 to 2000nm (S-9011 is up to 1500nm). Suited for measuring spectral irradiance of solar simulator and natural sun light. And it is fit for evaluate several kinds of solar cells including multi junction type and CIS. Moreover by Time resolution measurement (Refer to next page), it is possible to measure the spectral distribution of pulse solar simulator every 1msec. This is the versatile instrument capable of a variety of applications.

Features

Enable to measure from UV to NIR, wide range

Line up for 2 type of measuring wave length range for different purposes. Our products are available in a wide range of spectral irradiance measurements.

- S-9001 Measurable wavelength range : 300~2000nm
- S-9011 Measurable wavelength range : 300~1500nm

High speed time resolution measurement every 1msec

By high speed linear array and Electronic circuit, achieved for emission spectrum distribution measuring at 1msec minimum distance.

Optimized design for solar simulator measuring

According to the wavelength of radiation from sunlight or solar simulator optimize sensitivity. S/N in the near infrared to ultraviolet improved.

Synchronous measuring of simple pulse light

Photo diode inserted to light receiving section (Reflecing Diffuser/refer to below pics) detects the rising pulse light. It is possible to synchronized measuring with pulse solar simulator. And enable to configure the delaying time from inputting the pulse light to measuring starting time.

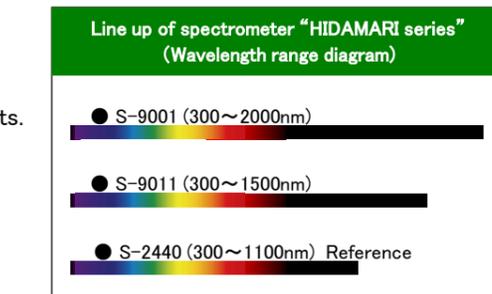
Adopted excellent cosine characteristic "Reflecting Diffuser"



Size : H15 x W60 x D80 / φ 40mm

- It is durable and easy to maintain. And also, it has high diffusability and cosine characteristic.
- It is needed to recalibrate when replacing Optical Fiber and Diffuser.

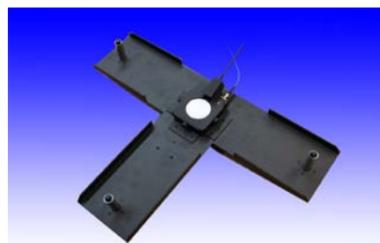
Option : Reflecting Diffuser fixed unit (For solar simulator of upper beam type)



The Optical Fiber can be stored into the main body



Reflecting Diffuser fixed unit (Option)



Methods of use : Reflecting Diffuser is fixed on the jig, and it is used toward surface of the irradiation.

Applied to multi-type evaluation of spectral match.

Applied standard of spectral match evaluation

- JIS C 8912-2011/IEC 60904-9(ED-2)-2007 (Solar simulators for crystalline solar cells and modules)
- JIS C 8933-2011 (Solar simulators for amorphous solar cells and modules)
- JIS C 8942-2009 (Solar simulator for multi-junction solar cells and modules)
- TS C 0050-2010 (Solar simulator for CIS solar cells and modules)

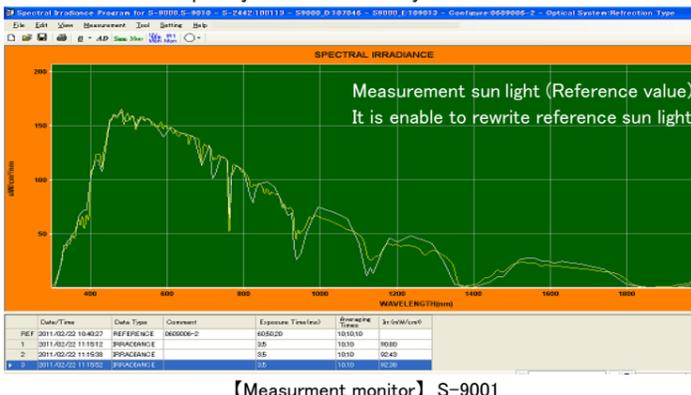
Response to meet the standards for the various solar simulators. Evaluation of the spectral match (A, B, C) can be calculated instantly.

Spectral irradiance measurement program (Standard option / S-9001, S-9011 Common)

Measuring Item

① Spectral irradiance (μW/cm²/nm)

The measuring data is displayed on PC by the graph and list. And enable to output by text format every 1nm.



[Measurement monitor] S-9001

Measuring Mode

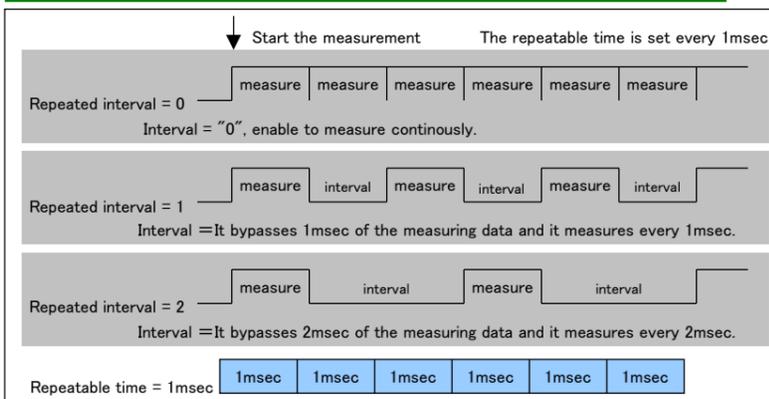
- ① Stationary light measuring ... Mainly it is used for continuous light.
- ② Time repeatable measuring ... You can measure repeatedly on fixed time intervals.
- ③ Time resolution measuring (External trigger mode) ... By entering trigger signal, continuous high speed measuring at minimum every 1msec.
- ④ Standard light measuring ... It is used for calibrate the equipment by using spectral irradiance standard sphere. The difference between time repeatable measuring and time resolution measuring : In time resolution measuring, since there is no data transfer and data processing between the measuring, it is possible to measure continuously without intervals.

② Spectral Match

You can select the measuring data that you want to evaluate. The calculation of Spectral Match is automatic.

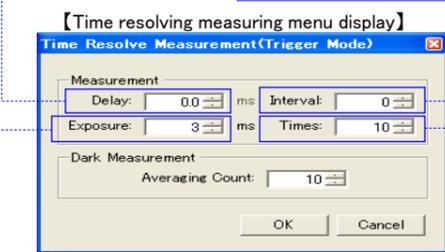
[Spectral matching monitor]

Out line of the Time resolution measuring movement



Enable to configure the actual starting time after inputting external trigger. 1msec pitch, Max 6500msec

Configure the repeated interval (Interval time) continous repeated measuring : interval=0 (Refer to the left topics)



Configure the repeated time (Exposure time)

Enable to configure the number of the measuring Max 1000 data

System Map

