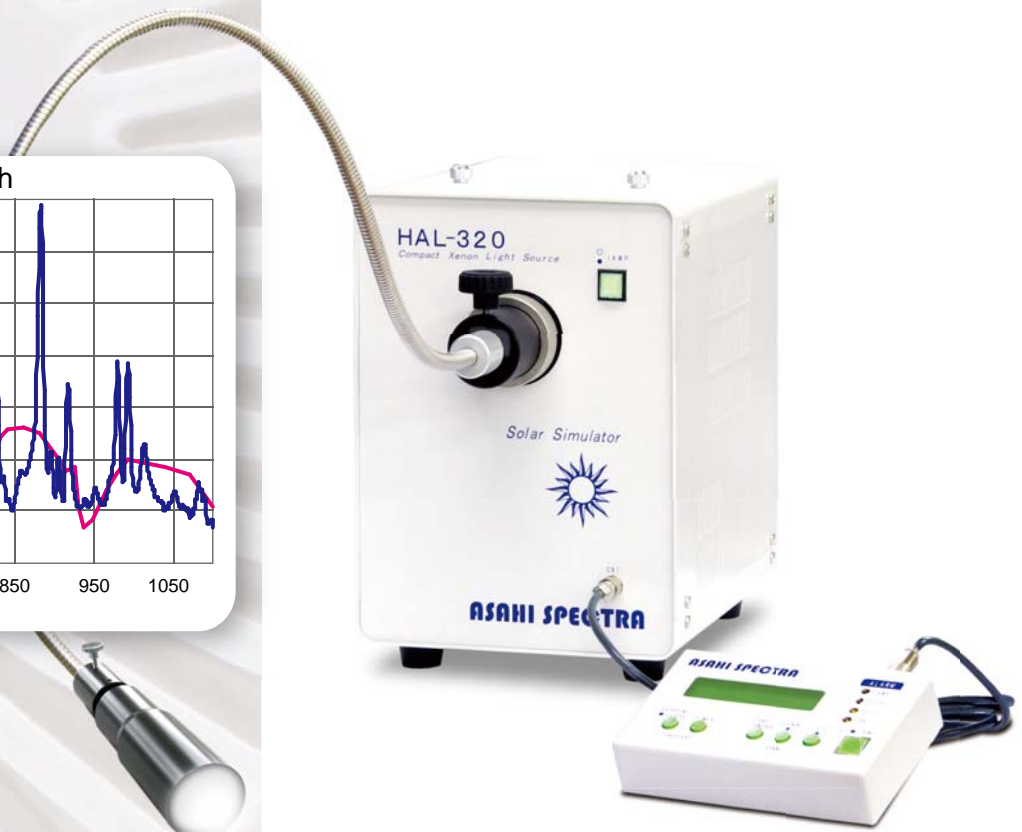
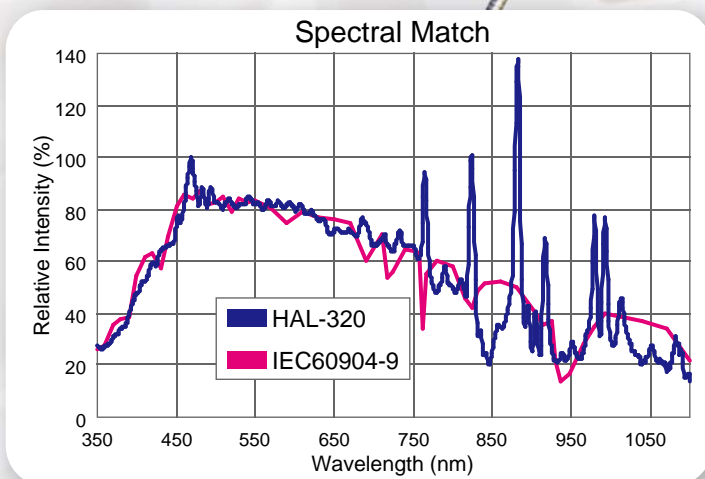


# Solar Simulator (400-1100nm)

## HAL-320

### Compact design and practical fiber illumination system

- Both the lamp and the power supply are in one compact box
- Flexible fiber light guide enables the illumination for any direction
- Embedded variable ND filter enables to control the light intensity continuously (100-30%)
- Spectral match between 800-1100nm also achieves Class A as well as VIS range
- Remotely controllable by the original controller or PC through RS232C
- Reasonable price compared to other conventional solar simulator



# Solar Simulator (400-1100nm)

## Spectral Matches

Wavelength(nm)	Energy Distribution(%)		Spectral Match	
	HAL-320	JIS		
400- 500	18.0	18.5	97	A
500- 600	20.3	20.1	101	A
600- 700	18.4	18.3	101	A
700- 800	15.7	14.8	106	A
800- 900	12.2	12.2	100	A
900-1100	15.3	16.1	95	A

The combination of xenon lamp and proprietary mirror unit produce the characteristics Class A spectrum. The mirror unit blocks unwanted spectrum up to 3200nm and the emitted output would be ideal solar spectrum without heat.

## Nonuniformity

The calculated value of 1SUN in the range from 400 to 1100nm is about 72mW/cm<sup>2</sup>.

class A  
36 x 36mm

Irradiance Area  
60 x 60

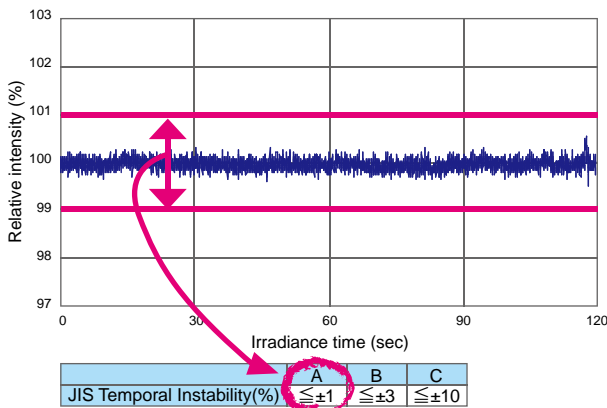
Work distance: about 441mm

You can get Class A uniformity in the area 36x36mm with 1 SUN intensity when you set the ND control by about 70% of initial lamp as described in the left figure.

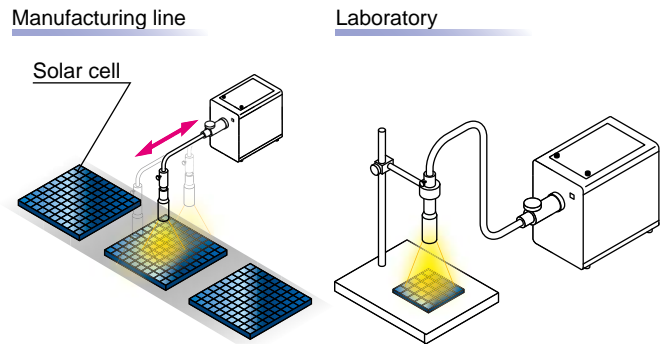
\* Above explanation is reference value. Please be noted that the output of lamp varies between the manufacturing lots.

JIS Non-uniformity(%)	A	B	C
	≤±2	≤±3	≤±10

## Temporal Instability



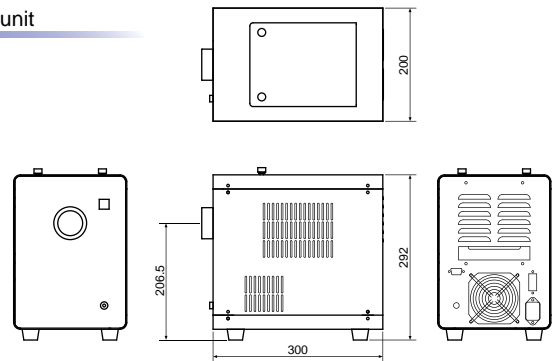
## Usage Example



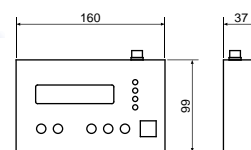
## General Specifications

- Model: HAL-320
- Spectral Range: 400 - 1100nm
- Circuit method: Forward converter switching
- Input voltage: AC100-240V 50/60Hz
- Power consumption: less than 510VA (100V 50Hz)  
: less than 500VA (240V 50Hz)
- Lamp type: Xenon lamp 300W
- Lamp life: 500hrs
- Lamp maintenance: Free alignment(Cartridge type)
- Cooling method: Forced cooling
- Shutter: DC solenoid
- Exposure time set: 0.5 - 99999.9sec
- Intensity adjustment: 100 - 30%(Transmittance)  
Continuously variable
- Emitting method: Bundled light guide
- Controller: Remote controller (cable length=2m)
- Remote control: RS232C
- Recommended environment: Temperature 10 - 35 deg C  
: Humidity 20 - 80%
- Dimensions: Main unit 200(W) x 300(D) x 292(H)mm  
: Controller 160(W) x 37(D) x 99(H)mm
- Weight: Main unit 8.7kg  
: Controller 0.5kg

### Main unit



### Controller



Unit: mm

\*We accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation.

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