SPECIFICATIONS

AAA Class Solar Simulator

Model: XES-160S1

SAN-EI ELECTRIC CO., LTD

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1. Introduction

This highly accurate solar simulator is designed for 6inch cell (effective irradiated area □160mm). All optical specifications certified JIS 8912 / IEC 60904-9 (2007) / ASTM E927-5 AAA class.

● System Configuration

Light Source Unit	**XES-1003S** Size: W 480 × H 842 × D 776.2 mm Net Weight: 48kg
Power Supply	**XEC-1000M4** Size: W320 × H230 × D480 mm Net Weight: 20kg
Filter	AM 1.5G
Lamp	1000W Xenon Lamp, **L10SS**
Accessories	Power Input Cable (3.5sq Triplex with Earth) Power Supply-Light Source Connecting Cable (2 pins) Shutter Cable (3 pins) Inter-lock / Fan Cable (14 pins) Remote Control Cable A (30 pins) Operation Manual & Measurement Report

2. Components

Shutter Unit	Manual or timer controlled (0.1 S ~ 9990 Hrs) Drive System: Solenoid
Output Adjustment	By changing the current lamp power（60～100%） *Indicated in the lamp output display
Lamp Power Indicates	Lamp Power, Lamp Current, Lamp Voltage
Cooling Fan Motor	Auto-stop after the lamp extinguished over 20 minutes
Interlock	Lamp shutoff automatically when the lamp exchange door is open
Overheat Prevention Mechanism	Thermostat inside lighting source Thermostat inside power supply
Lamp Hour Meter	Indicating operation time of lamp
Optical Axis Adjustment Mechanism	X-axis, Y-axis, Z-axis adjustment knob, Arc Monitor
Remote Control Functions	Power input signals Lamp on input signals Shutter timer start input signals Shutter Manual open input signals
Monitoring Functions	Shutter open confirmation output signals Shutter closed confirmation output signals Lamp on confirmation output signals Lamp stability indicator output signals Light source over-heat alarm output signals Power supply over-heat alarm output signals Inter-lock alarm output signals Lamp life time over alarm output signals

3. Optical Specifications

Effective Irradiated Area	□160mm
AM filter	AM1.5G
Direction of Irradiance	Rotatable: Up/Downward, Right/Left, 4 direction
Irradiance	1,000W/㎡ (Adjustable range: 800~1200 W/㎡)
Temporal Instability of Irradiance	<±**1% /hr** (**JIS/IEC/ASTM** Class **A**)
Irradiance Uniformity	<±**2%** (**JIS/IEC/ASTM** Class **A**)
Spectral Coincidence	**<±25%** (**JIS/IEC/ASTM** Class **A**) AM 0 is possible.
Lamp Life	Average 1,000 hours Guarantee Time 500 hours

4. Electric Specifications

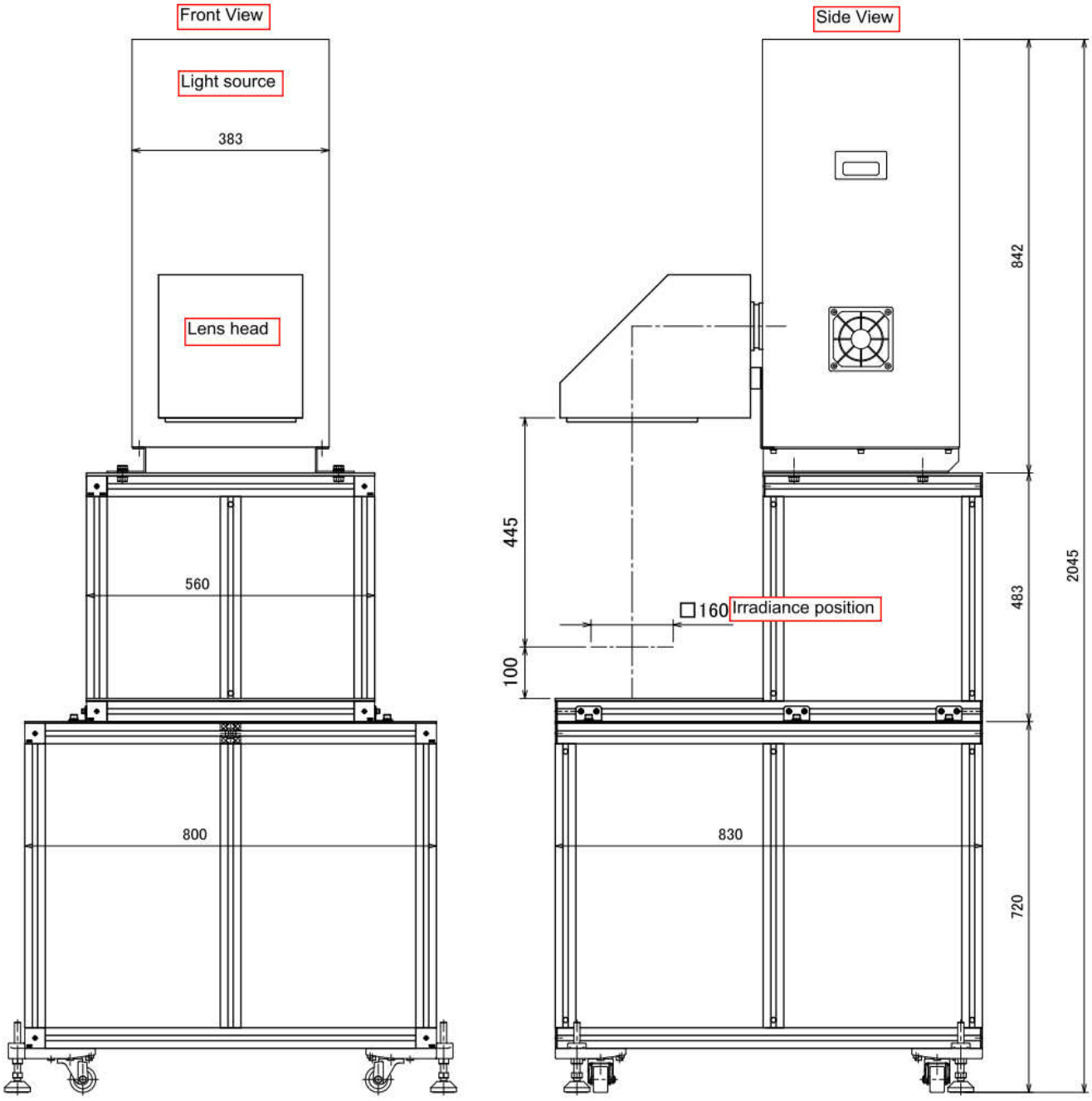
Rated Input	AC200-240V 50/60 Hz 1φ 1.6kw(Max)
Rated Lamp Voltage	DC20V
Rated Lamp Power	About DC35-50A
Insulation Resistance	DC 500V above 20MΩ Input～Output / Output between F.G～between F.G Output～between F.G
Voltage Endurance	Input ~ Output between F.G AC 1,000 V 1 minute Output ~ between FG AC 500 V 1 minute

5. Operating Environment

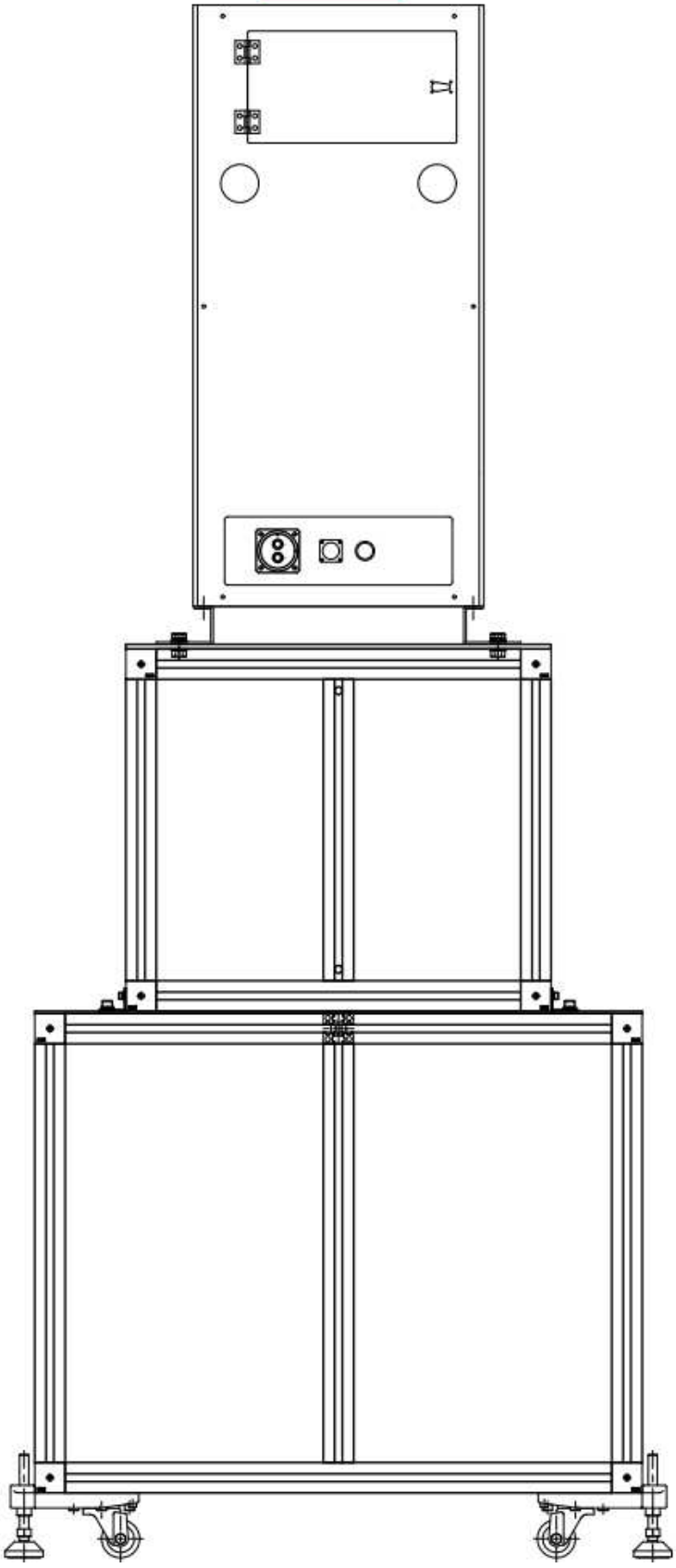
Temperature	20～30℃（RT value）
Humidity	20～85%（RH value No Condensation）

6. Dimension

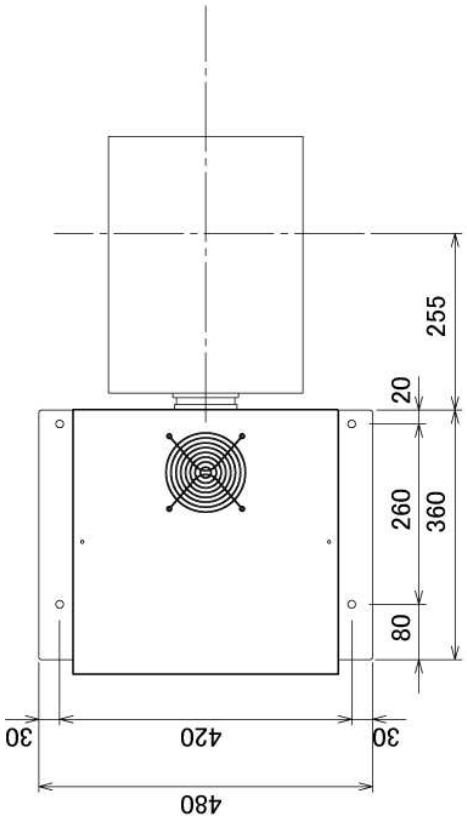
A. Light Source: XES-1003



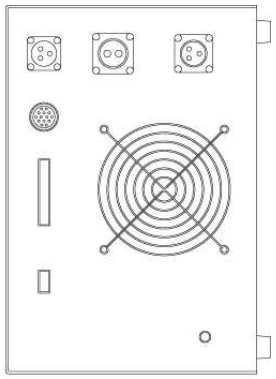
Rear View

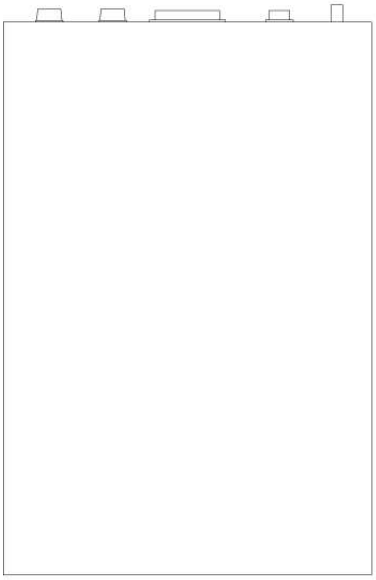


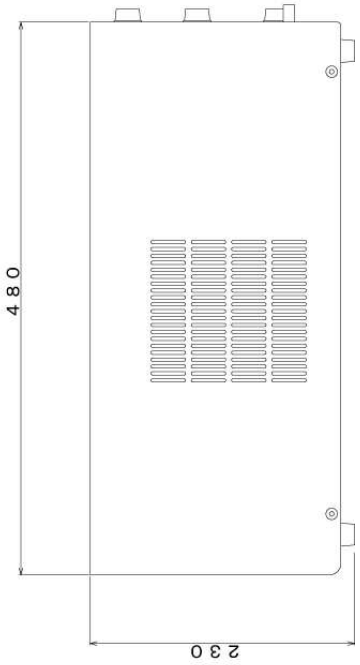
Top View

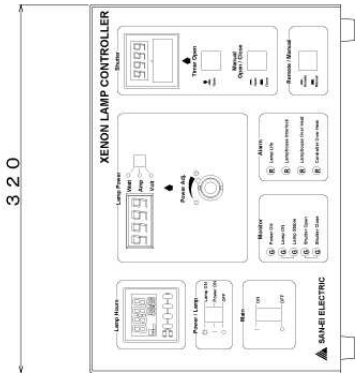


B. Power Supply: XEC-1000M4









7. Warranty

Warranty period covers one year after delivery with a service time (accumulated lamp lighting time) less than 1,000 hours.

Should incident or malfunctioning occur due to design or manufacturing defects of our company within the above mentioned warranty period, compensation is provided for repair or replacement of the malfunctioning parts only.

Please clearly indicate the details of the claimed malfunctions and ship the device to our company.

The warranty does not cover the following items:

1) Accidents or malfunctions occur as a result of wrongful usages not covered in this manual.
2) Malfunction or accidents resulted from modification unauthorized by SAN-EI electric Co., Ltd.
3) Malfunction or secondary damages from natural or man-made calamities.
4) Damage compensations for accidents or malfunction.
5) Damage compensations for patent infringement by users operating this device.