

K5700

Electrical, Optical & Thermal
Imaging & Test Systems

PV Module Light Soaking System

Process for Performance Enhancement of PV Module

Light soaking process is essential for product stabilization and performance enhancement, especially for thin-film photovoltaic module.

Light Soaking + Solar Simulator



Light Soaking Process

Thin-Film PV Module (CIGS/Si)

Irradiation Intensity Control

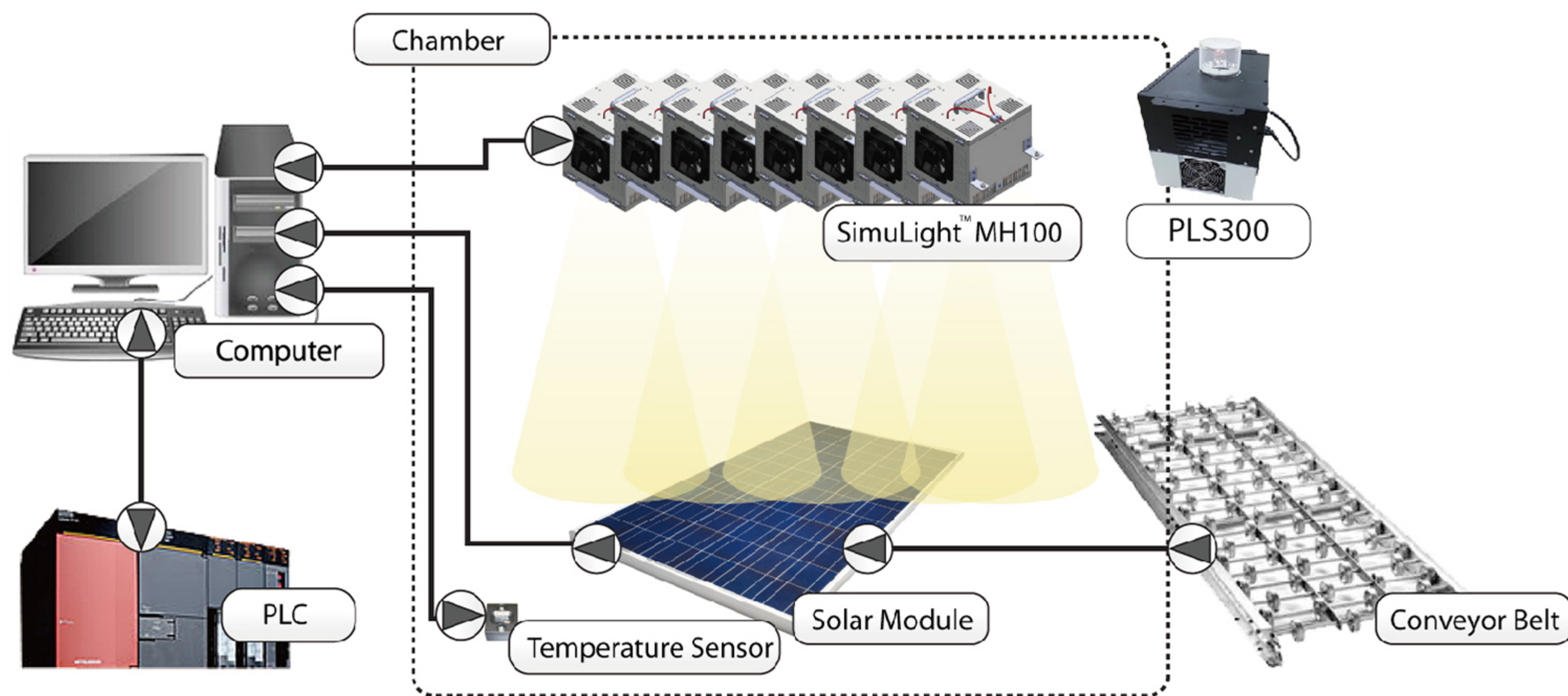
Temperature Stabilization



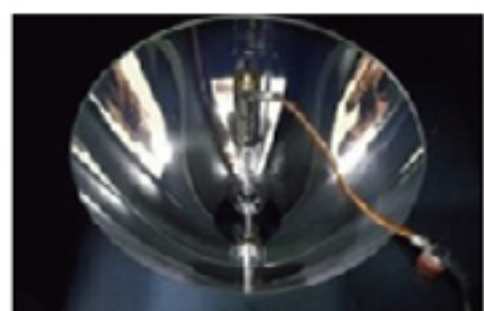
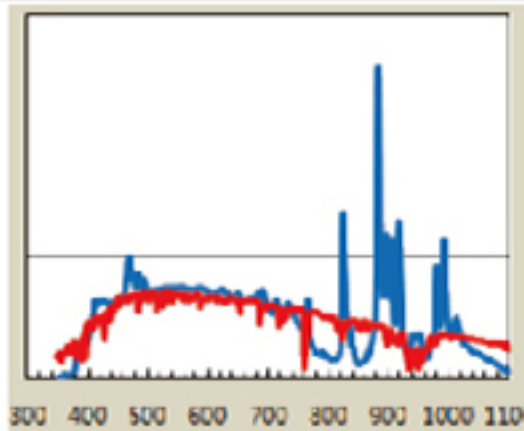
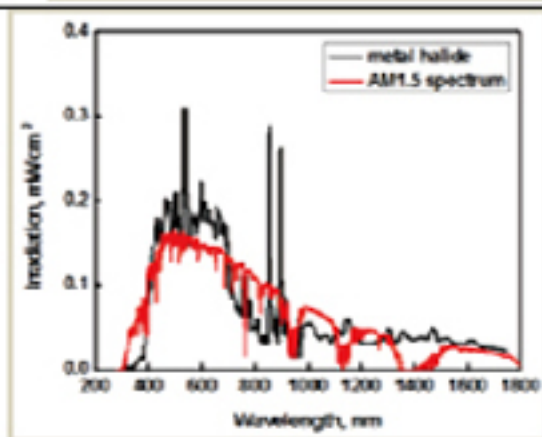
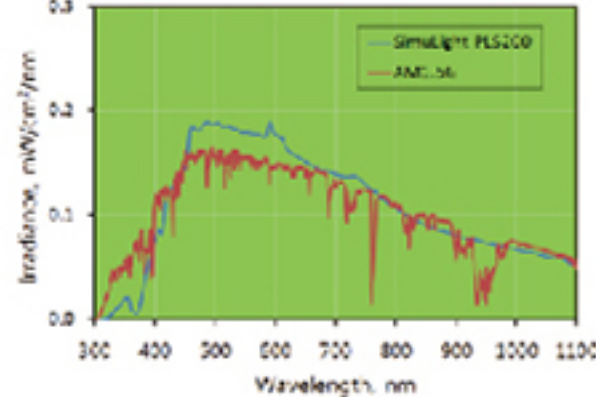
 **McScience**

Copyright© McScience Inc. All Right Reserved.

System Configuration



Lamp Comparison

Field	Lamp Type	Spectrum Match		AM1.5G Filter	Lamp Lifetime (guaranteed)																						
Xe Lamp			<table><thead><tr><th>AAAAAAA</th><th>Mismatch</th><th>Class</th></tr></thead><tbody><tr><td>400 ~ 500</td><td>1.21</td><td>A</td></tr><tr><td>500 ~ 600</td><td>1.05</td><td>A</td></tr><tr><td>600 ~ 700</td><td>0.98</td><td>A</td></tr><tr><td>700 ~ 800</td><td>0.80</td><td>A</td></tr><tr><td>800 ~ 900</td><td>1.06</td><td>A</td></tr><tr><td>900 ~ 1,100</td><td>0.85</td><td>A</td></tr></tbody></table>	AAAAAAA	Mismatch	Class	400 ~ 500	1.21	A	500 ~ 600	1.05	A	600 ~ 700	0.98	A	700 ~ 800	0.80	A	800 ~ 900	1.06	A	900 ~ 1,100	0.85	A	A	Y	1,000 hr (500 hr)
AAAAAAA	Mismatch	Class																									
400 ~ 500	1.21	A																									
500 ~ 600	1.05	A																									
600 ~ 700	0.98	A																									
700 ~ 800	0.80	A																									
800 ~ 900	1.06	A																									
900 ~ 1,100	0.85	A																									
MH Lamp			<table><thead><tr><th>AAAAAAA</th><th>Mismatch</th><th>Class</th></tr></thead><tbody><tr><td>400 ~ 500</td><td>1.13</td><td>A</td></tr><tr><td>500 ~ 600</td><td>1.20</td><td>A</td></tr><tr><td>600 ~ 700</td><td>1.25</td><td>A</td></tr><tr><td>700 ~ 800</td><td>0.74</td><td>B</td></tr><tr><td>800 ~ 900</td><td>0.83</td><td>A</td></tr><tr><td>900 ~ 1,100</td><td>0.69</td><td>B</td></tr></tbody></table>	AAAAAAA	Mismatch	Class	400 ~ 500	1.13	A	500 ~ 600	1.20	A	600 ~ 700	1.25	A	700 ~ 800	0.74	B	800 ~ 900	0.83	A	900 ~ 1,100	0.69	B	B	Y	6,000 hr (2,000 hr)
AAAAAAA	Mismatch	Class																									
400 ~ 500	1.13	A																									
500 ~ 600	1.20	A																									
600 ~ 700	1.25	A																									
700 ~ 800	0.74	B																									
800 ~ 900	0.83	A																									
900 ~ 1,100	0.69	B																									
PLS Lamp			<table><thead><tr><th>AAAAAAA</th><th>Mismatch</th><th>Class</th></tr></thead><tbody><tr><td>400 ~ 500</td><td>0.96</td><td>A</td></tr><tr><td>500 ~ 600</td><td>1.09</td><td>A</td></tr><tr><td>600 ~ 700</td><td>1.00</td><td>A</td></tr><tr><td>700 ~ 800</td><td>1.02</td><td>A</td></tr><tr><td>800 ~ 900</td><td>0.88</td><td>A</td></tr><tr><td>900 ~ 1,100</td><td>1.01</td><td>A</td></tr></tbody></table>	AAAAAAA	Mismatch	Class	400 ~ 500	0.96	A	500 ~ 600	1.09	A	600 ~ 700	1.00	A	700 ~ 800	1.02	A	800 ~ 900	0.88	A	900 ~ 1,100	1.01	A	A	N	20,000 hr (10,000 hr)
AAAAAAA	Mismatch	Class																									
400 ~ 500	0.96	A																									
500 ~ 600	1.09	A																									
600 ~ 700	1.00	A																									
700 ~ 800	1.02	A																									
800 ~ 900	0.88	A																									
900 ~ 1,100	1.01	A																									



<K5700 PV Module Light Soaking Software>

System Specification

Model Name	K5700 PV Module Light Soaking System
System Configuration	SimuLight MH100(Metal Halide Lamp), SimuLight PLS300(Plasma Lamp), Conveyer, Chamber, PLC, Temperature Sensor, Touch Monitor
Light Source	Metal Halide Lamp, Plasma Lamp
Light Source Class	IEC60904-9 Class BCA, Class ABA
Light Intensity	0.5 Sun ~ 1.0 Sun
Irradiation Area	1,200mm x 2,200mm
Temperature Control	50±10℃
Dimension	Size(mm³) : (W)2,870mm x (D)1,425mm x (H)2,500mm
Test Sample	CIGS Si PV Module