

MODEL: LC-LED-AAA-300S

Lecheng Intelligent LED Solar Simulator

The Ideal Choice for Perovskite Photovoltaic Testing

Lecheng Intelligent

Core Technical Advantages

Optical Shaping System for More Accurate Testing

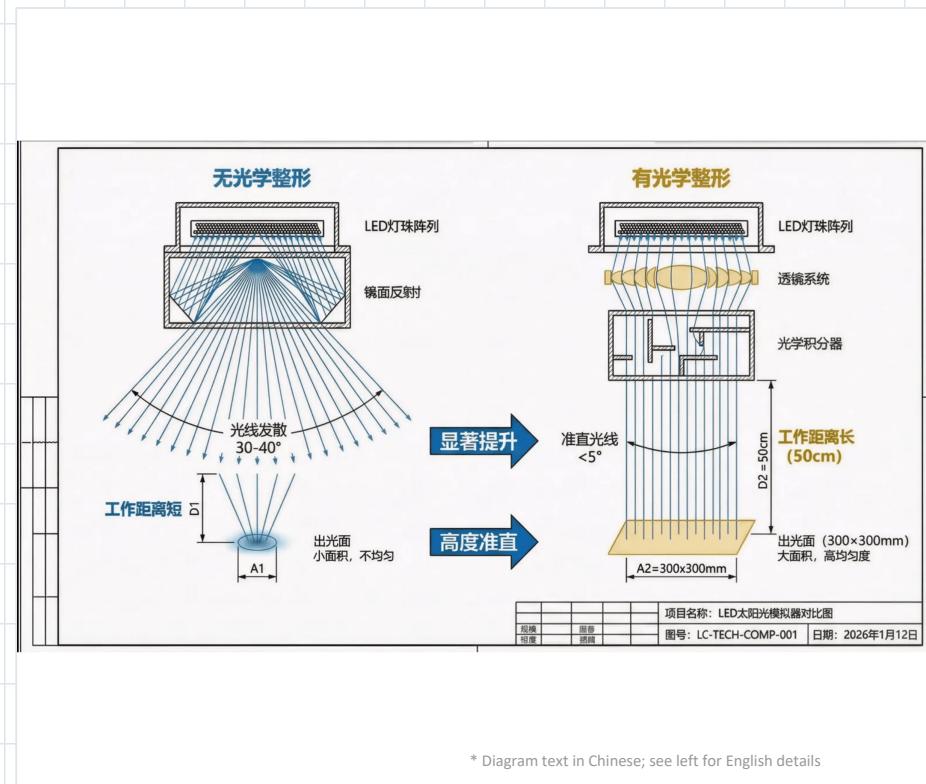
Competitor Limitations

- Lack of optical shaping, direct LED emission
- 30-40° light divergence, non-parallel light
- Short working distance, small/non-uniform area

Lecheng Intelligent's Breakthrough

- Complete optical shaping: Lens + Integrator
- Collimation angle $< 5^\circ$, true parallel sunlight
- 50cm working distance, 300mm uniform spot

Indicator	Competitor	Lecheng (LC-LED-AAA-300S)
Collimation	30-40° (Divergent)	$< 5^\circ$ (Collimated)
Working Dist.	Short	50 cm
Area	Small/Non-uniform	300 × 300 mm (Class A)



International A+ Standard Certification

Performance Exceeding Industry Requirements

The product has been rigorously tested by third-party authoritative institutions, with all core indicators meeting or exceeding the highest requirements of IEC 60904-9 Edition 3 international standards.

Spectral Match

A+

- Coverage: 350nm - 1200nm full spectrum.
- All six key wavelength bands achieve A+ standard.
- Ensures accurate spectral response testing for perovskite materials.

Irradiance Uniformity

A

- Effective irradiation area: 300 × 300 mm.
- Non-uniformity $\leq 2\%$.
- Ensures consistency in large-area device testing.

Temporal Stability

A+

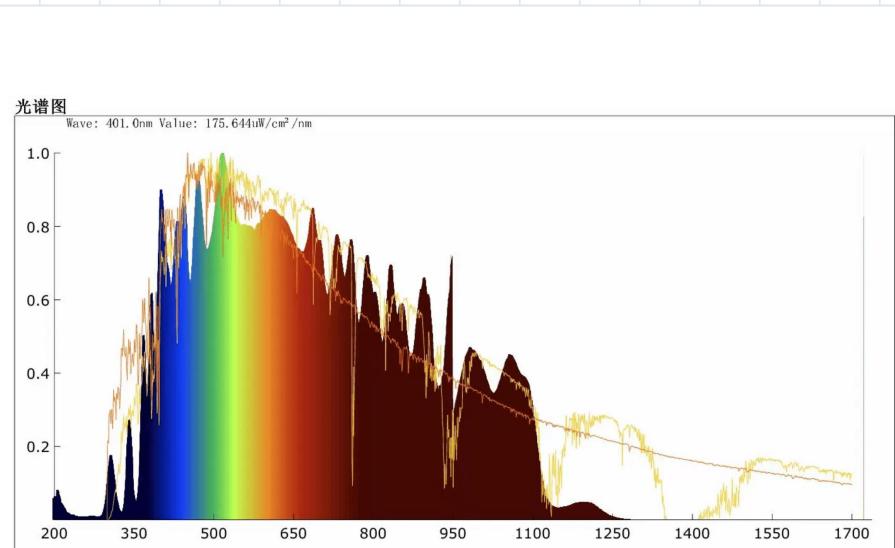
- Short-term stability $\leq 0.25\%$.
- Long-term stability $\leq 1\%$.
- Supports transient pulse ($>200\text{ms}$) and steady-state continuous (24-1000h) testing.

Precise Spectral Reproduction

Designed Specifically for Perovskite Photovoltaics

LC-LED-AAA-300S covers a broad spectral range from 350nm to 1200nm, perfectly matching the full-band absorption characteristics of perovskite solar cells from ultraviolet to near-infrared.

Wavelength Band (nm)	Measured Ratio	Grade
300 - 470 (UV-Blue)	1.0030	A+
470 - 561 (Blue-Green)	1.0241	A+
561 - 657 (Green-Yellow)	1.0311	A+
657 - 772 (Red)	1.0375	A+
772 - 919 (Near-IR)	0.9783	A+
919 - 1200 (Near-IR)	0.9261	A+



Measured Spectral Chart: Highly consistent across all bands

Flexible Testing Capabilities

Meeting Multi-Scenario R&D Requirements

Wide-Range Irradiance

0.3 ~ 1.2 sun

300 - 1200 W/m² Continuously Adjustable

1.2 sun (High Intensity)

Device tolerance testing

1.0 sun (STC)

Standard efficiency calibration

0.3 sun (Low Light)

Indoor/low-light performance evaluation

Transient Pulse Mode

Pulse > 200ms

Suitable for rapid I-V characteristic measurements, effectively avoiding the impact of device overheating on test results.

Steady-State Continuous Mode

24h - 1000h

Specifically designed for long-term stability testing and aging experiments, meeting perovskite device lifetime evaluation requirements.



10,000+ Hours

LED Light Source Lifetime



Water Cooling

Standard Industrial System

Complete Solution

Comprehensive Support from Equipment to Service

Turnkey System Configuration



Main System

LC-LED-AAA-300S Solar Simulator Host



Power System

Standard 5000W isolation transformer, ensuring power stability



Cooling System

Standard industrial-grade water chiller, ensuring stable long-term operation



Optical System

Built-in optical integrator and multiple lens groups, collimation angle < 5°

Professional Service Guarantee



Installation & Training

Free on-site installation, commissioning, and operation training



Technical Support

Instant phone support on working days, answering technical questions anytime



Rapid Response

48-hour on-site service commitment, reducing downtime



Quality Assurance

One-year free warranty for the entire machine, long-term supply guarantee for core components



Application Environment Recommendations: To ensure optimal performance, it is recommended to use in a constant temperature and humidity environment with air conditioning, with ambient temperature preferably not exceeding 25°C.

Why Choose Lecheng Intelligent?



Technology Leadership

International A+ standard certification
Optical shaping system ensures testing accuracy



Professional Focus

Designed specifically for perovskite PV applications
Precise spectral matching across all bands



Flexible & Reliable

Dual-mode operation, wide-range adjustment
10,000-hour ultra-long lifetime



Comprehensive Service

From installation training to after-sales maintenance
Full-range professional support

Lecheng Intelligent

Let us work together to drive innovation and development in perovskite photovoltaic technology



Looking forward to creating the future with you

The most professional, efficient, and intelligent solution in the field of perovskite testing.

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