Lighting Global Quality Assurance

PowerPoint slides available upon request. Contact qa@lightingglobal.org.
Agenda

- What is Lighting Global Quality Assurance?
- Who is Lighting Global Quality Assurance?
- Why does quality matter?
- Lighting Global Quality Standards
- Benefits of quality-verification
- Testing & verification overview
- Market surveillance
- How to get in touch with the Lighting Global team
What is Lighting Global Quality Assurance and What Does it do?

Lighting Global Quality Assurance catalyzes off-grid solar markets to power the world’s poorest people.

**Lighting Global Quality Assurance:**
1. Develops and manages the test methods and quality standards that serve as a universal benchmark for product quality and performance.
2. Offers manufacturers expert, unparalleled quality-verification services, product performance benchmarking, and guidance on how to improve their products.
3. Provides technical assistance to national governments and other large institutions with a commitment to quality.

What does success look like?

- A competitive global market where quality products are the default option.
- Consumers are satisfied with their purchases, so markets are not spoiled.
- More households achieve higher levels of energy access faster.
Core Elements of Lighting Global Quality Assurance

Lighting Global QA Framework

Test Methods and Quality Standards

- Technical Specification 62257-9-5, Ed. 4.0
- Quality Standards

Testing and Verification

- ISO 17025 accreditation using ILAC affiliated organizations

Communicating Quality to the Market

- Stakeholder engagement
- Consumer awareness campaigns
- Product listing on Lighting Global website
Who is Behind Lighting Global?

- Created Lighting Global and continues to fund program
- Manages Lighting Global Business Development Services
- Headquartered in Washington, DC with offices in Kenya, India, and Europe
- Leading international voice and resource for appliance energy efficiency policy and market acceleration initiatives
- Manages Lighting Global Quality Assurance
- Located at Humboldt State University in California
- Providing technical and strategic support to Lighting Global Quality Assurance for more than 10 years
- Now under contract to CLASP
Why does Quality Matter?

- Off-grid solar markets lack strong consumer protection frameworks
- Poor quality products can lead to “market spoilage”
- Results from a recent Lighting Global study indicate that non-quality verified pico-solar products break more often, more quickly, and undermine consumer confidence and market health
Quality Matters – Understanding non-Quality Verified Products

Pico-solar products—lanterns or multi-light systems with a peak PV module power of up to 10 watts—make up the largest share of off-grid solar product sales.

The global pico-solar market is dominated by products that have not yet been quality verified by Lighting Global or have failed to meet Lighting Global Standards.

To better understand the performance of these products, Lighting Global tested 17 top-selling, non-Quality Verified pico-solar products from retail stores in five markets: Ethiopia, Kenya, Myanmar, Nigeria, and Tanzania.
Quality Matters - Understanding non-Quality Verified Products

100% of the tested products failed to meet the Lighting Global Standards. Nearly all of the products lacked consumer-facing information, or had some combination of technical issues that would shorten product lifetime and contribute to consumer dissatisfaction, which may make them less likely to purchase other products.

Access the full study at: www.lightingglobal.org/resource/quality-matters/

- 94% had one or more deficiency known to affect product durability
- 88% inaccurately advertised product performance
- 88% did not have a consumer-facing warranty
- 76% would require significant changes to meet the Standards
The Quality Standards are benchmarks that set a baseline level of quality, durability, and truth-in-advertising to protect consumers of off-grid lighting products.

Conformance is evaluated based on results from laboratory testing according to International Electrotechnical Commission (IEC) Technical Specification 62257-9-5.

Tests are conducted at third-party, approved test centers that are ISO 17025 accredited.

The Lighting Global Quality Standards are the only internationally recognized standards for these products and are expected to be adopted by the IEC by the end of 2019.
**Lighting Global Quality Standards Core Elements**

**TRUTH IN ADVERTISING**
Advertising and marketing materials accurately reflect tested product performance.

**LUMEN MAINTENANCE AND DURABILITY**
Product maintains consistent light output after 2,000 hours of operation. Product is appropriately protected from water exposure and physical ingress, has durable switches and connectors and, if portable, survives being dropped.

**SYSTEM QUALITY AND SAFETY**
Product passes a visual wiring and assembly inspection, and is safe to use.

**WARRANTY**
A consumer-facing warranty is available; the required warranty duration varies by product type.
Benefits for Manufacturers

- **Gain entry to markets** where Lighting Global quality verification and test reports can be used to demonstrate compliance with national standards
- **Signal product quality** to professional buyers and investors
- Have confidence that **products are tested correctly and test reports are accurate**
- **Compare products to competitors’ products** through benchmarking services
- Get **help bringing products into compliance** with the quality standards
Benefits for Distributors

- **Qualify products** for bulk procurements, results-based financing schemes, and working capital facilities
- Quickly and easily **identify** products that will meet customers’ needs and expectations
- **Reduce the financial and reputational risks** associated with guaranteeing products to end consumers
Benefits for Investors

- **Reduce risk** by investing only in companies that trade in products designed to meet consumers’ expectations for quality, performance, and durability
Benefits for Governments

- Use the framework as a basis for tax and duty policies, voluntary market stimulation programs, and product regulations to protect consumers.

- Aligning with international standards reduces the time and resources needed to develop and implement such policies.

- Give consumers expanded access to global product innovation.
Lighting Global Quality Verification Process

**Pico-PV Products**

(≤ 10 W<sub>p</sub>)

**Solar Home System Kits**

(10 W<sub>p</sub> - 350 W<sub>p</sub>)

**Random sampling and full testing at a test lab in the Lighting Global Lab Network**

**Test results are evaluated by the QA team against the standards and company receives results**

**A product that meets the Standards receives a Standardized Specification Sheet, Verification Letter, and a listing on the Lighting Global website**
Testing Timeline Overview

Sample Collection → Laboratory Testing → LG Review & Cover Letter

- Manufacturer signs test agreement
- Lab starts test
- Lab completes test
- Results sent to manufacturer

3-4 months
Verification Documents

Standardized Specification Sheet & Verification Letter

Public listing on Lighting Global website
Market Surveillance Protects Consumers & Instills Trust in Program

Lighting Global conducts market surveillance through two pathways: market check test and market observations. If a product fails to meet the Standards and the manufacturer does not take action, it will lose verification status.

**Market Check Tests** - randomly sample quality-verified products from retail shops and performs laboratory testing according to the Market Check Method (MCM) as described in [IEC/TS 62257-9-5](#).

**Market Observations** - use an app to evaluate consumer-facing information, such as packaging and warranty, of quality-verified products in retail shops.
Next Steps

To find quality-verified products, visit: www.lightingglobal.org/products/

To get your products quality verified, contact: qa@lightingglobal.org

To learn more about Lighting Global Quality Assurance, visit: https://www.lightingglobal.org or contact the Lighting Global team for more information: qa@lightingglobal.org