

# Lighting Global Quality Verification Manufacturer Playbook



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# 1 Introduction to Lighting Global





# Who is Lighting Global?



**Lighting Global** is the World Bank Group's initiative to rapidly increase access to off-grid solar energy for the 840 million people living without grid electricity world-wide. Lighting Global – managed by IFC and the World Bank – works with manufacturers, distributors, governments, and other development partners to build and grow the modern off-grid solar energy market.

# Lighting Global 10 years of impacts

## 10 YEARS OF IMPACTS



**94 MILLION**

People are currently benefitting from products meeting Lighting Global Quality Standards in low and middle income countries.<sup>1</sup>

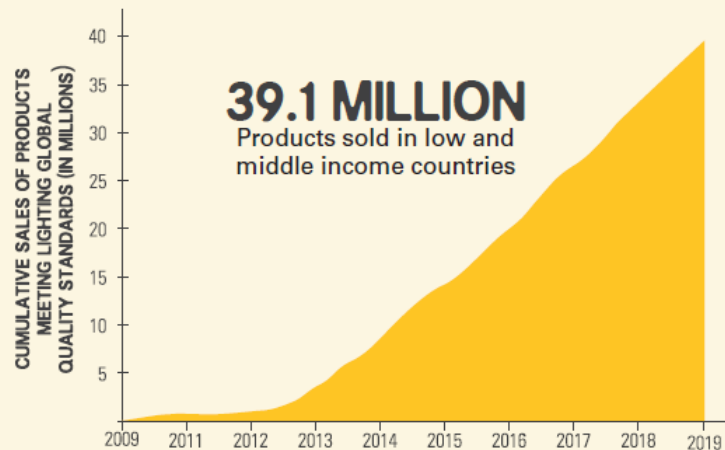


**34.8 MILLION**

Metric tons of CO2e emissions avoided due to the use of products meeting Lighting Global Quality Standards. This is the equivalent of taking 7.4 million cars off the road for a year.<sup>2</sup>



- <sup>1</sup> Of these, 51.5 million are currently meeting their basic energy needs with these products (Tier 1 or better according to the Multi Tier Framework).
- <sup>2</sup> This emissions estimate is calculated according to GOGLA's impact metrics considering products of 0.5Wp+ and assuming a life-cycle of 3 years. The car equivalency is based on epa.gov.



## **2 Access Off Grid Markets as Lighting Global Quality Verified Manufacturers**



# What is Lighting Global Quality verification?



Lighting Global Quality verification is the product quality testing process of [Lighting Global Quality Assurance program](#) - the most widely recognized Quality Assurance framework for off-grid energy products.

The program provides buyers with reliable technical information and connects them with manufacturers and sellers of quality-verified products.

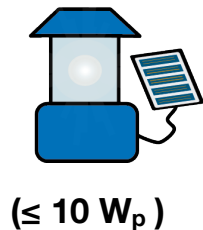
For manufacturers, getting products Lighting Global Quality verified signals quality driven product offerings to the market. It also leads to a unique access to broader business opportunities through Lighting Global [business development services](#).



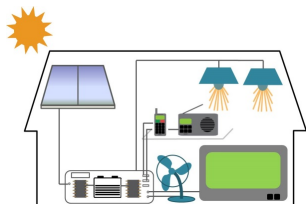
# Quality verification scope

## Product Scope

### Pico-PV Products

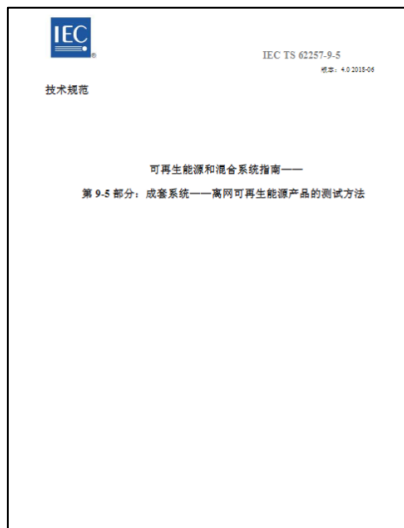


### Solar Home System Kits



## Test Methods

### IEC TS 62257-9-5



## Quality Standards

### Lighting Global Quality Standards / IEC TS 62257-9-8





# Lighting Global Quality Standards

## Addressing the core aspects of off grid energy products:



### Truth in Advertising

Advertising and marketing materials accurately reflect tested product performance



### System Quality

Product passes a visual wiring and assembly inspection



### Warranty

A consumer-facing warranty is available; the required warranty duration varies by product type



### Durability

Product is appropriately protected from water exposure and physical ingress, has durable switches and connectors and, if portable, survives being dropped



### Lumen Maintenance

Product maintains consistent light output after 2,000 hours of operation

# Why get your products Quality verified?

1

## **Gain entry to markets**

where quality verification & test reports can be used to demonstrate compliance with national standards.

2

## **Attract professional buyers and investors**

by signaling product quality to market.

3

## **Have confidence**

that products are tested correctly and test reports are accurate.

4

## **Compare products**

to competitors' products through benchmarking services.

5

## **Bringing products into government regulatory compliance**

especially in [countries that adopted or are in process of adopting](#) Lighting Global Quality Standards.

# Countries using our Quality Standards

24

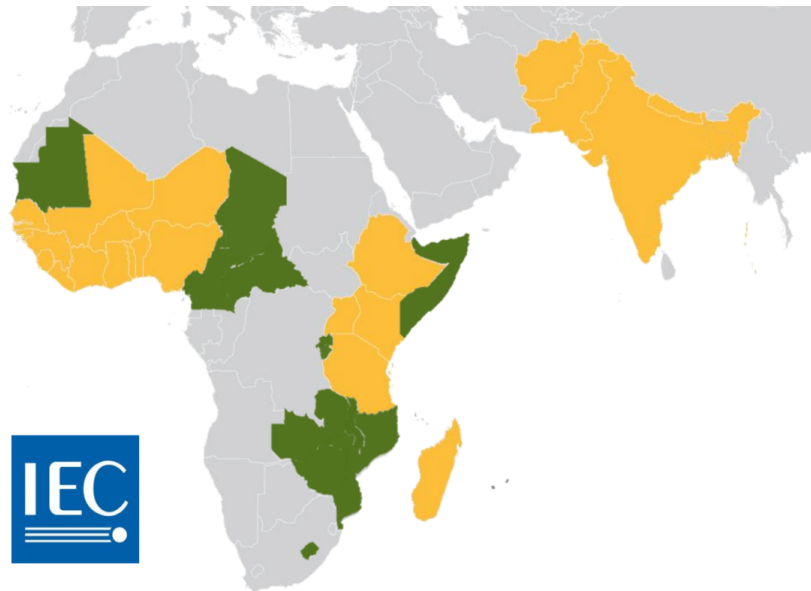
**national governments**  
recognize Lighting Global  
/ IEC Technical Specification  
62257-9-5 **including China**

**Reference countries:**

*DRC, Ethiopia, Kenya  
Liberia, Malawi, Mali  
Mozambique, Rwanda  
Uganda, Zambia,  
ROGEP, Myanmar  
Vanuatu, Haiti*

Countries that  
have adopted or  
initiated process of  
adoption.

Countries expected  
to initiate process  
with IEC adoption in  
near-term.





# Exclusive business development services

## Lighting Global Business Development Services

**For all companies with  
Quality Verified  
Products:**



**Market intelligence**



**Opportunity Mapping**



**Sales Trends  
Deep Dives**



**Path to Profitability**



**B2B Linkages**



**PAYG Market  
Attractiveness Index**

# IFC - World Bank program linkages



## Lighting Africa program:

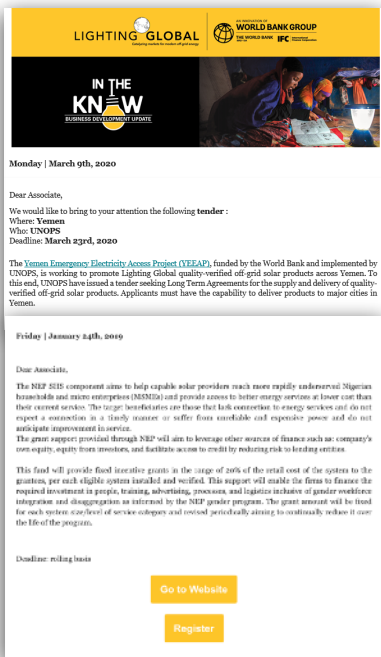
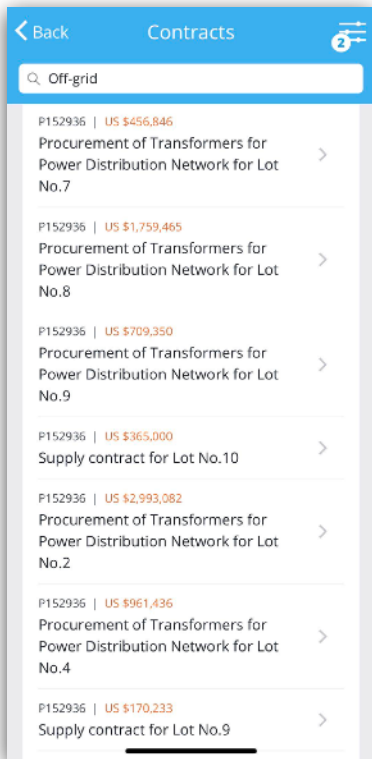
- **17 countries** in operation
- Lighting Global Associate distributors and local organizations



## Lighting Asia program:

- **6 countries** in operation
- Lighting Global Associate distributors and local organizations

# World Bank Group procurement opportunities



## World Bank Group procurement:

- For projects from **World Bank Group** as well as World Bank **borrower countries** ( over 200 countries and regions )  
*Reference: total **World Bank procurement for off-grid energy products yield over \$100 millions in fiscal year 2019 ( year 2018 - 2019 )***

## Lighting Global Quality verified product only procurement highlights:

- **Yemen:** tender for **Lighting Global Quality verified products** with a power range from 10(Wp) to 350(Wp) in major cities in Yemen by [Yemen Emergency Electricity Access Project](#)
- **Nigeria:** project grant is provided to Lighting Global Quality verified Solar Home System suppliers by [Nigeria Electrification Program](#) to support underserved households access better energy



# Lighting Global Quality verified portfolio

## Lighting Global Quality Verified Manufacturers :



**54**

Off grid solar brands



**13**

Chinese off grid solar brands



**129**

Quality verified Pico products (≤ 10W)



**56**

Quality verified Solar Home System (> 10W-350W)

International brands:



African and Asian brands:



Mibawa solar solutions transform lives.



Chinese brands:



# 3 How to Get Lighting Global Quality Verified?



# It's easy to get started

1

## Not for profit program

- Both Lighting Global and Quality Assurance are **not-for-profit programs**, **Quality verification service fee** (around \$1000) and **product testing fee** are cost to be taken care of by manufacturers depending on test lab of their own choice.
- Lighting Global Quality verified manufactures can benefit business development services at free of charge.

2

## Quality driven verification

- The industry relies on high quality products to fulfill customer's expectations for safety, durability and performance. **Lighting Global Quality verification is built on Quality Standards recognized internationally and trusted by all market actors.**

3

## Verification achieved within 4 months\*

- Standardized process to ensure an effective product testing which takes from 2.5 - 4 months to achieve depending on testing products ( Pico product or Solar Home System\* ).





# Teams you will be working with

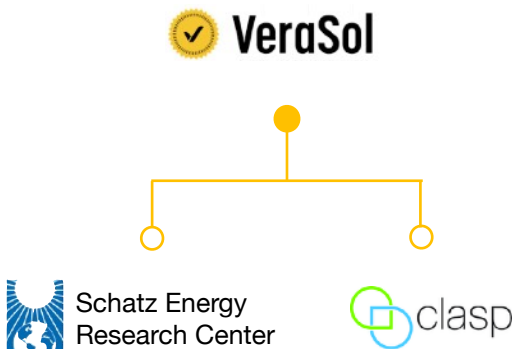
## Client service team

Team that helps new manufacturers to navigate through Lighting Global program while enabling quality verified manufacturers tap into more quality driven market opportunities.

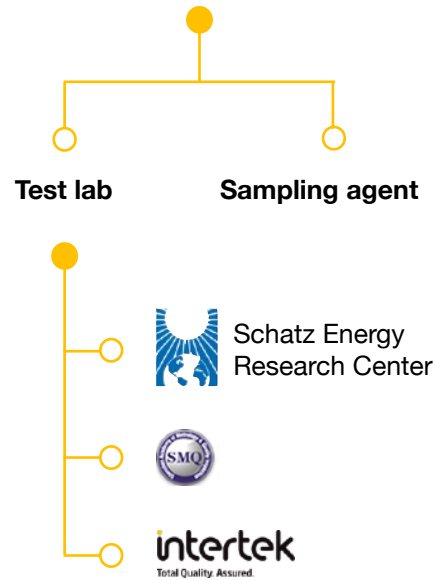


## Quality Assurance (QA) team

Team that leads Lighting Global Quality verification once manufacturers submit their off-grid energy products for testing. QA team is the anchoring role to lead between quality verification and third party's work during the process.



## Third party



# Testing timeline overview



3 - 4 months

# Step 1. Company outreach consultation

## 1 Before committing anything, get to know Lighting Global 100% with Client service team!

- Get to know the reasons and benefits of getting your product Lighting Global quality verified, our client service team will navigate you through the program and get your questions answered before starting

→ Visit Lighting Global Website

→ Contact Client Service China Team

→ Submit Products to Quality Verification



## Step 2. Testing initiation: takes 1 - 2 weeks

### 2 Submit your products to quality verification online

- Submit your chosen products ( Pico products or SHS ) by filling out the **Manufacturer Information Form**

### 3 Choose a test lab

- Choose one of Lighting Global's approved test labs based on lab availability and relative fees

#### Lighting Global Quality Assurance approved test labs:



**Schatz Energy  
Research Search Center**  
California, USA



**Shenzhen Academy of  
Metrology & Quality Inspection**  
Shenzhen, China



**Intertek**  
Hong Kong,  
China

## Step 2. Testing initiation: takes 1 - 2 weeks

### 4 Schedule testing plan with QA team

- **Define testing methods** ( Initial Screening Method\* and/or Quality Test Method\* ) based on product submitted with QA team
- Depending on Pico-PV product or SHS and sample amount to test, QA team will follow up with you to determine a test plan and correspondent service fee

### 5 Complete paperworks before official testing

- Complete **test agreement** required by **Lighting Global**
- Complete **test contract** with the **Testing lab**
- Complete the **Independent Testing Agreement** with QA team upon test plan confirmation

# Testing methods

## Initial Screening Method ( ISM )      Quality Test Method (QTM )

Testing requirement	Optional	Mandatory
Time estimate	4 - 8 weeks	15 - 22 weeks
Sample amount	1 unit by test At least 3 units for both Pico product and SHS testing	18 units selected from 500 product stock for Pico product testing 16 units selected from 200 product stock for SHS testing
Standard	Latest version of <a href="#">IEC/TS 62257-9-5</a>	Latest version of <a href="#">IEC/TS 62257-9-5</a>
Method introduction	The ISM is an optional, abbreviated test method that can offer key feedback to the manufacturer and indicate whether the product is likely to meet the Quality Standards.	The QTM is the full test method used to verify comprehensive product quality and performance. Results from QTM testing are used to determine if a product has met the Quality Standards. Random selection of the product samples that are to be sent to the test lab is required and must be arranged in advance through Lighting Global.

# Step 3. Send samples: takes 2 weeks

## 6 Prepare samples

- Submit the **Random Sampling Form** to start the sampling preparation
- QA team and third party agent to arrange sampling based on requirement of QTM testing standards

## 7 Send samples

- Send the sampled products to your chosen test lab for testing



# Step 4. Testing: takes 15 - 22 weeks (QTM)

## 8 Product testing led by test lab

- Testing lab will lead the product testing with technical guidance of QA team
- Testing lab will send the testing result to QA team once testing completed ( result to be sent individually in case of multiple product testing )

## 9 Test report review led by QA team

- QA team will review test report and determine if products tested meet the requirements of Lighting Global Quality Standards
- QA team will verify if all fees to test lab and QA were paid before issuing official results

# Step 5. Test results announcement: takes 1 - 2 weeks

## 10 Test results delivery

- QA team will send the **Test Report** and **Cover Letter** to manufacturer to give an overview of the test results
- Upon validation of tested products meeting Lighting Global Quality Standards, QA team will issue a **Standardized Specification Sheet (SSS)** and a **Verification Letter (VL)** to manufacturers
- In case of testing products not meeting Lighting Global Quality Standards, QA team will follow up with the manufacturer to determine steps ( see next page )

## 11 Lighting Global website official announcement

- Upon completion of quality verification, Lighting Global will feature the new certified manufacturer and its quality verified products on the Lighting Global website - official site to confirm supported products by Lighting Global program

# In case of not meeting Quality Standards

## **? If the product(s) do NOT FULLY meet the Quality Standards due to easy to fix issues that can be addressed without retesting:**

- The QA team informs the manufacturer that it has a “Conditional Pass” in a letter that accompanies the official test results.
- A conditional pass gives manufacturers an opportunity to make required changes in the product packaging or documentation to meet the Quality Standards.

## **? If the product(s) do NOT meet the Quality Standards:**

- The QA team informs the manufacturer via email that the product did not meet the Quality Standards, and describes the main points of failure. Furthermore, the QA team includes a “Feedback Letter” that explains the test results and suggested next steps.

# Lighting Global Quality credentials



## Quality verification valid for 2 years

Lighting Global Quality Verification is valid for 2 years, the credential is subject to further **Renewal** after expiration.



## Further testing

Lighting Global Quality verified products may be subject of **Market Check Method Testing** at program entry.



## Retesting

**Retesting** required for product ongoing changes resulting 10% performance difference.



## 4 Contact us



# Get in touch with Lighting Global



Lighting Global website: [www.lightingglobal.org](http://www.lightingglobal.org)

Quality Assurance enquiries: [qa@lightingglobal.org](mailto:qa@lightingglobal.org)

Client service China team: [hhui@ifc.org](mailto:hhui@ifc.org)

Associate enquiries / Business development services: [bds@lightingglobal.org](mailto:bds@lightingglobal.org)

# Thank you!

