

Lighting Global Quality Testing: Testing Similar Products Policy

Version 4

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Manufacturers often offer product models that are essentially variations of an existing product. In such cases, the Lighting Global Quality Assurance Program offers manufacturers the option of using full test results for at least one product, and targeted testing for the variant products. This option is provided as a service to manufacturers to help reduce testing costs; without this option, every product would need to be tested in entirety.¹

In this policy, the product that is fully tested will be referenced as “product A” and the variant as “product B.” Since it is possible to have more than one variant product and each variant is unique, the Lighting Global team will work with manufacturers on a case-by-case basis to minimize the scope (and cost) of testing the variant products.

PROCEDURAL GUIDELINES ON THE HANDLING OF PRODUCT VARIATIONS

1. The primary product (“A”) must undergo full testing.
2. Test results for the primary product (“A”) may be applied to a variant product (“B”) in cases where the design and specifications of the system with respect to the relevant performance parameter are identical. For example, if products “A” and “B” use the same solar PV module, then test results for the PV module for product “A” may be applied to product “B.”²
3. New tests are required for product “B” to address differences in design or component specification between products “A” and “B.” Here it is important to consider differences in component specification as well as system level effects. For example, if product “B” has a different battery than product “A” then new tests for battery capacity (component level test) and full-battery run time, solar run time, and lighting service (system level tests) would be required. Depending on the specifics of the product design, additional new tests may also be required.
4. In all cases, test results must be generated that allow for full characterization of the quality and performance of each product. In other words, results for product “B” may be drawn from a combination of results for product “A” (where applicable) and new tests of product “B,” and the sum of these test results must allow for full characterization of product “B” to provide the information required to fill in a Standardized Specifications Sheet and assess whether the product meets the Lighting Global Quality Standards.

¹ Manufacturers should note that regardless of a product’s status of support from Lighting Global, some governments, importation agencies and procurement programs might require full, independent test results for each product.

² Lighting Global reserves the right to carry out a check test of a PV module for product “B” to confirm that the claim that the PV modules are identical is reasonable.

DETERMINING THE SCOPE OF TESTING FOR VARIATIONS ON A SIMILAR PRODUCT

1. **Manufacturers must submit a request for Lighting Global to consider a reduced scope of testing for particular product(s).** The request should include a table of product attributes that indicates the degree of similarity (e.g., “identical,” “same supplier but 2x larger,” etc.) for each aspect of the products in question. Table 1 (page 3) is an example of the template for reporting similarities and differences. Companies should also include clearly labeled photographic images of the primary product and each of the variants. The photographs should include all product/system components that can be shown without disassembling the respective products.
2. **The Lighting Global team will determine which test results are required to produce valid results for multiple product variations.** Lighting Global will provide a proposed testing plan for the variations. Lighting Global will also specify a sampling plan for the primary and variant products (i.e., Lighting Global will specify the number of samples that must be collected for each product and—where applicable—each product component).
3. **Sample collection and testing commence after the manufacturer agrees to the plan in writing by signing the Lighting Global Independent Testing Agreement.**
4. **Test results for each product will be provided.** Typically, the main product will receive a full test report and the variations will receive partial reports. Lighting Global will issue one or more cover letters that clearly describe which results apply to each product.
 - a. If the primary product (“A”) meets the Lighting Global Quality Standards, then the variant products (“B”) may also be in a position to pass (if all new test results for product “B” also meet or exceed the relevant requirements).
 - b. If the claims made by the manufacturer regarding product similarity are confirmed by testing and other relevant criteria are met, Lighting Global will offer program support (Standardized Specification Sheet and Type Approval/Verification Letter) for each of the products that meet the Lighting Global Quality Standards.
 - c. If the claims regarding similarity are dubious, the manufacturer will receive the test reports, but further sampling and testing may be required to allow for complete characterizations for each of the variant products. The Lighting Global team will issue a cover letter that includes a description of the required additional testing.
5. In cases where similar products are not tested at the same time, but instead one product references results from an older test, similar procedures will be used to determine the appropriate test plans. The expiration date of the Lighting Global Standardized Specification Sheet and Type Approval / Verification Letter for the new product may be dependent on the expiration date of the older product. Please see the [Product Support Expiration Policy](#) for details.

Table 1. Product variation details template

Element	Primary Product	Variation 1	Variation 2	Variation 3	Variation 4
	[insert name]	[insert name]	[insert name]	[insert name]	[insert name]
Performance					
Number of light output levels					
Luminous flux for each light output level					
Full-battery run time for each light output level					
Solar run time for each light output level					
Light source					
Type (e.g. high/low power LED, through-hole/surface mount LED, CFL, etc.)					
Number of light sources (e.g. number of LEDs)					
Additional details (e.g. optics, etc.)					
Energy Source					
PV Module					
Type (e.g. mono-si, poly-si, amorphous, etc.)					
Rate Specifications (Wp, Isc, Voc at STC)					
PV Module Manufacturer					
Other Energy Source					
Type (e.g. mechanical dynamo, AC grid, etc.)					
Additional details					
Other Energy Source					
Type (e.g. mechanical dynamo, AC grid, etc.)					
Additional details					
Battery					
Chemistry (e.g. SLA, Li-ion, NiMh, etc.)					
Capacity (mAh)					
Nominal voltage (V)					
Battery Manufacturer					
Additional details					
Electronic Circuits					
Charge controller (description)					
Lamp driver (type)					
High/Low voltage disconnect					
Mobile phone charging					
Other					
Other					
Balance of system components					
Switches					
Cables					
Sockets					
Other					
Other					
Housing					
Material					
Size (dimensions)					
Handle(s) (description)					
Ingress protection (e.g. gaskets, double flange, etc.)					
Other					
Other					
Consumer Facing Ratings					
Brightness settings advertised on the packaging/user manual / website					
Ingress protection advertised on the packaging/user manual/website(e.g. IPXX, waterproof, dustproof, water resistant etc.)					
Run time combinations advertised on the packaging/user manual/website (e.g. lighting run time in combination with cell phone charging, torch use or radio use)					
Any other packaging changes?					
Additional features / accessories / appliances					
PayG Function (Yes/ No)					
[insert element]					
[insert element]					
Contact Information					
Any change to company name, contact person, email, phone number or address					