

Thank you for choosing the Schatz Energy Research Center as your testing lab. Please follow these shipping guidelines to help ensure that we receive your product in a timely manner.

Documents You Will Need:

A detailed pro-forma invoice should provide all of the information needed to clear U.S. Customs and Border Protection. A complete invoice should have:

1. Full name and address of both shipper and receiver
2. Invoice number and date
3. Detailed description of products being shipped
4. Value of each item in each package, and total package value
5. Country of origin for goods being shipped (see notes on next page)
6. Purpose of the export - include that samples are for testing purposes and NOT for resale
7. Payment terms - indicate that the testing samples are being provided free of charge
8. Delivery terms (Incoterms) - specify DDP (Delivered Duty Paid), or that the exporter is responsible for fees
9. Authorized signature and company stamp

To Avoid Customs Delays:

Specify “Delivered Duty Paid,” or DDP

Do not mark “Delivered At Place” (DAP) or the shipment may be refused.

Give detailed product descriptions on the invoice

Include information such as materials and size, as these help customs officials determine what entry restrictions apply. Some examples of good and bad product descriptions are below.

Shipments valued over US\$2500 will likely be delayed

Shipments worth more than US\$2500 are considered “high-value,” and are subject to additional scrutiny and paperwork.

POOR DESCRIPTION

“Water pump”

Does not list any details about the product; shipment could be held or incorrect duty rate could be applied

GOOD DESCRIPTION

“Testing sample of solar water pump with a charge controller and separate photovoltaic modules”

Gives relevant materials and size information and states that samples will be used for testing

BETTER DESCRIPTION

“Testing sample of Sunlight Solar’s SP100 off-grid, solar water pump with (2) 240 W, 2496 in², separate polycrystalline silicon photovoltaic modules”

Gives relevant materials and size information, states that samples will be used for testing, gives explicit product identification for clarification

Determining Country of Origin

When solar products are assembled in a different country from the component parts, there are specific criteria to determine the country of origin:

- If the solar product is assembled in China, then China is the country of origin, regardless of where the components are sourced.¹
 - If a solar module is assembled in China using solar cells from Taiwan, China is the country of origin.
- If the solar product is assembled outside of China, the country where the solar cell components were manufactured is the country of origin.²
 - If solar cells manufactured in Taiwan are assembled into complete modules in Thailand, the module's country of origin would be Taiwan.

Navigating Duties for Chinese Products

Solar products from China are generally subject to anti-dumping and countervailing duties. However, many solar lighting products are exempt from some of these duties. Currently, anti-dumping duties do not apply to the following classes of products:

- Thin film photovoltaic modules using amorphous silicon (a-Si), cadmium telluride (CdTe) or copper indium gallium selenide (CIGS),
- Crystalline silicon photovoltaic cells which are less than 20 μm thick, or
- Crystalline silicon photovoltaic cells which
 - Have a total area less than 10,000 mm^2 (approximately 15.5 in^2), and
 - Are “permanently integrated into a consumer good whose function is other than power generation and that consumes the electricity generated by the integrated solar cell.”²

Lithium Ion Batteries and Pro-forma:

A good *general* place to start, for shipments by air, is the IATA Guidance Document: <https://www.iata.org/whatwedo/cargo/dgr/Documents/lithium-battery-shipping-guidelines.pdf>. However, individual carriers can, and often do, have requirements that are more strict than the IATA guidelines, so it is very important that you contact the carrier or freight forwarder you are going to use and find out what their specific requirements are. For example, here in the US, if you are using DHL, your account must be specifically authorized to ship lithium-ion batteries. Usually, the relevant information that you will need to provide to the shipping company is the following:

- Whether they are lithium metal or lithium-ion batteries
- Whether the batteries are contained within the equipment they are intended to operate, packed with the equipment, or shipped separately.
- The capacity of the battery in watt-hours.

You may need to provide a UN 38.3 test report for the batteries, which you should be able to get from the battery supplier.

Tariffs :

Tariffs are based on the country of origin, not the country of export. The tariffs and duties associated with these imports are quite confusing and constantly changing. There are 3 different US HTS codes that can apply to PV modules:

- 8541.40.6015 - general code for PV modules

In addition to the above, importers are supposed to specify one or both of the following:

- 9903.88.02 - additional 25% duty for all PV cells/modules from China
- 9903.45.25 - additional 30% duty for PV modules (on top of the first 25%), with quite a few exceptions. you can find the exceptions starting at the very bottom of page 174 of in note 18 (c) (iii).

Look through notes 18 and 20 to chapter 99 of the HTS, and then select the correct HTS code(s).

Disclaimer

While we have made every effort to make this guide as accurate as possible, the information should be taken as recommendations only. Shipping regulations vary between countries and frequently change. Please research the applicable shipping regulations before sending any package. The Schatz Energy Research Center cannot be held responsible if shipments are delayed or charged unexpected fees.

¹ *Sunpower Corporation vs. United States*, Consol. Court No. 15-00067, United States Court of International Trade

² *Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China; Amended Final Determination of Sales at Less Than Fair Value, and Antidumping Duty Order*, 77 FR 73018 (December 7, 2012); *Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China; Countervailing Duty Order*, 77 FR 73017 (December 7, 2012)