

Blue Wafer Duty Evasion

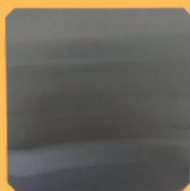


Certain Chinese-owned solar manufacturers operating in the United States are importing partially made cells (“blue wafers”) and falsely declaring them as “wafers” to evade U.S. trade duties. This violates America’s trade laws designed to counter China’s predatory trade practices and protect U.S. manufacturers. **U.S. Customs and Border Protection (CBP) must immediately crack down on this duty evasion and collect millions in unpaid duties.**

What are Blue Wafers?

- “Blue wafers” are silicon wafers that have been chemically treated to form a positive/negative (P/N) junction that creates an internal electric field when exposed to sunlight and an anti-reflective coating, giving them a characteristic **blue** color.
- They are mostly finished cells that only need metallization, the printing of the metal busbars, and contacts to collect and extract the electricity. Depending on the cell type, about 50–80% of the manufacturing costs and associated capital expenditures for cell production are attributable to blue wafer production.
- Grey and Black Wafers, in contrast, are undiffused, untextured raw substrates.

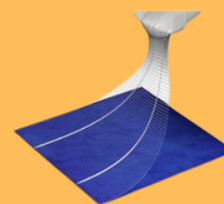
Raw Wafer



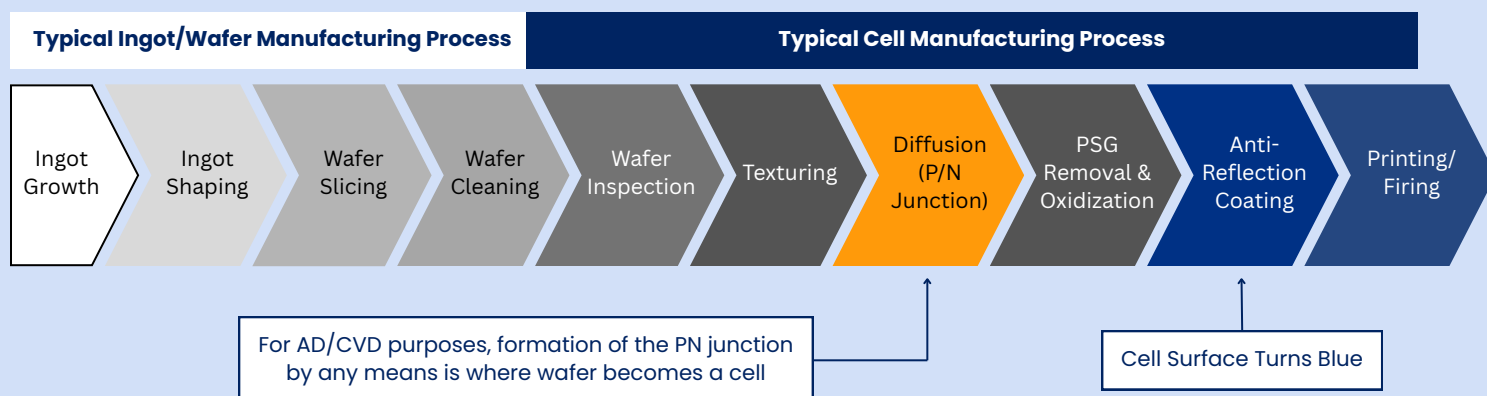
Blue Wafer
(AR Coated)



Cell Printing
Process



“Blue Wafers” are Formed in the Later Stages of Cell Manufacturing



All Solar Antidumping and Countervailing Duty (AD/CVD) Orders and a CBP Ruling indicate that an import is a solar cell when the P/N junction is formed, before the wafer is coated blue.

Solar AD/CVD duties covering cells from China, Taiwan, Vietnam, Malaysia, Indonesia, Cambodia, Laos, India, and Indonesia specifically indicate “blue wafers” are scoped as cells, defined as crystalline silicon photovoltaic cells of thickness equal to or greater than 20 micrometers, **having a p/n junction formed by any means.**

Evading these orders could cost tens of millions of dollars in lost duties.

- In a May 24, 2019 decision, CBP examined solar modules assembled in India using cells with P/N junctions formed in Taiwan. CBP identified the **diffusion process** (P/N junction formation) as the decisive step, because it gives the cell its **essential character** – the ability to convert sunlight into electricity.
 - **Key takeaway:** Substantial transformation occurs at the moment the P/N junction is created. Later steps, such as adding gridlines and circuitry, allow the solar cell to collect and forward the electricity, but do not create a new article with a new “name, character and use.”
- In a June 25, 2025 decision, CBP suggested that further processing after formation of the P/N junction may constitute substantial transformation. This directly conflicts with the 2019 ruling that remains in effect and has not been revoked. The underlying facts supporting this 2025 decision are currently being challenged.

Case Studies

