

Photovoltaic diode module manufacturers



Overview

This is a list of notable photovoltaics (PV) companies. Grid-connected solar (PV) is the fastest growing energy technology in the world, growing from a cumulative installed capacity of 7.7 GW in 2007, to 320 GW in 2016. In 2016, 93% of the global PV cell manufacturing capacity utilized (cSi) technology, representing a commanding lead over rival forms of PV tech.

Key Takeaways

Leading photovoltaic module manufacturers include JinkoSolar, LONGi Green Energy, Trina Solar, JA Solar, and Canadian Solar, among others, offering high-efficiency solar modules with global distribution.

- **JinkoSolar** – Headquartered in Shanghai, China, JinkoSolar is the world's largest PV module manufacturer with an annual production capacity exceeding 90 GW. The company specializes in high-efficiency monocrystalline modules using N-type TOPCon technology, achieving efficiencies over 22%. Its Tiger-Neo series is popular for both residential and commercial installations, with up to 30 years performance warranty on glass-glass modules .
- **LONGi Green Energy** – Based in Xi'an, China, LONGi focuses on monocrystalline silicon modules and N-type technology. It is vertically integrated, producing wafers, cells, and modules, and is known for high-efficiency BC (Back Contact) modules with strong global market presence .



- Trina Solar – A major Chinese manufacturer, Trina Solar ships over 70 GW annually. It invests heavily in R&D, producing high-efficiency modules suitable for utility-scale and commercial projects. Trina's modules are recognized for stable performance and durability .

- JA Solar – Headquartered in Beijing, China, JA Solar has a production capacity of over 80 GW. The company is fully vertically integrated, manufacturing wafers, cells, and modules. Its DeepBlue series, including N-type versions, offers high efficiency and reliable output, with up to 25 years performance warranty .

- Canadian Solar – While slightly smaller in volume (~31 GW shipments), Canadian Solar focuses on high-margin markets and offers a range of monocrystalline and polycrystalline modules with strong quality control and international distribution .

Other Notable Manufacturers

- Tongwei and CHINT (Astronergy) – Both companies leverage vertically integrated supply chains, shipping 40–45 GW annually, and are recognized for utility-scale project solutions .

- GCL SI, DAS Solar, Yingli Energy – These manufacturers occupy niche markets with specialized module offerings ranging from 15–25 GW in annual shipments .

- Elite Optoelectronics Co., Ltd., The Optoelectronics Co. Ltd., BWT – Emerging manufacturers with growing market presence, offering various photovoltaic modules for residential and commercial applications .

Key Considerations for Choosing a Manufacturer

- Technology: TOPCon, HJT, and IBC cells offer higher efficiency and long-term performance.

- Vertical Integration: Manufacturers producing wafers, cells, and modules in-house ensure stable supply and quality.

- Global Presence: Companies with international distribution networks can support large-scale projects and timely delivery.

- Warranty and Durability: Leading manufacturers provide 25–30 years performance guarantees, especially for glass-glass modules . These manufacturers dominate the global PV module market, particularly in China, which produces the majority of polysilicon, wafers, cells, and modules worldwide . Selecting a manufacturer should consider efficiency, reliability, production capacity, and after-sales support to ensure long-term project success.

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12 Photovoltaic Module Manufacturers in 2026

What Is a Photovoltaic Module? A photovoltaic module, comprising multiple solar cells encapsulated within glass or resin, directly

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