

Cost of Photovoltaic Cable Trays between China and Europe



AI Overview

Transport costs for solar components from China to Europe can account for up to 40–45% of the component's factory-gate price, with logistics disruptions and container shipping rates being major cost drivers. Transport Cost Overview Shipping photovoltaic components, including cable trays, from China to Europe involves ocean freight, port handling, customs, and inland transport. According to Fraunhofer ISE, transport costs for solar modules and components can reach up to 43% of the final module price in scenarios with low factory-gate prices and high container shipping costs, which can exceed \$15,000 per container. While cable trays are smaller and lighter than full modules, they are still subject to similar freight rate fluctuations, especially during periods of global logistics disruption.

Factors Affecting Costs

Container Shipping Rates: Ocean freight from China to Europe has been volatile due to supply chain disruptions, port congestion, and fuel costs. High container rates significantly increase the transport cost share of PV components.

Component Size and Weight: Cable trays are bulkier than cables but lighter than modules. Their transport cost per unit may be lower than modules but still substantial when shipped in smaller volumes.

Customs and Duties: European import tariffs, anti-dumping duties, and compliance with EU regulations can add to the landed cost of Chinese PV components.

Policy Incentives: EU policies, such as the Net Zero Industry Act (NZIA), aim to reduce reliance on imports and support local manufacturing. These policies may indirectly affect the cost competitiveness of imported cable trays by subsidizing European production.

Estimated Cost Range

While exact figures for PV cable trays are not publicly listed, using module transport as a reference:

Low-volume shipments: Transport costs could range from €0.05 to €0.10 per watt equivalent, depending on...

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Comparative Global PV Manufacturing Cost and Sustainable Pricing Assessment: China, Southeast Asia, India, USA, and Europe — S. Nold¹, B. Goraya¹, R. Preu¹, J ...

Photovoltaics Report

In 2025, Europe's contribution to the total cumulative PV installations amounted to 17%. In contrast, installations in China accounted for 51% (48% in 2024) and in North America for 9% respectively.

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Since shipping containers have fixed dimensions, changes in module format impact the number of modules per container and, thus the shipping costs per module. In this study, we aim to explore how

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Photovoltaics

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