

Five Reputable Glass Insulator Manufacturers in China 2026: Advancing Reliable Electrical Insulation Solutions

*Exploring Reliable Manufacturers
Providing Quality Glass Insulators for
Power Transmission Applications*

CALIFORNIA, CA, UNITED STATES, August 18, 2026 /EINPresswire.com/ -- China, August 18, 2026—As global transmission networks expand and aging infrastructure undergoes systematic upgrades, the demand for high-reliability glass insulators continues to rise. Market Research Future estimates the global glass insulators market was worth USD 1.14 billion in 2024 and projects it will reach USD 1.97 billion by 2035, growing at a CAGR of 5.1%. China remains the largest supply base for these components, accounting for 31.4% of total global exports of electrical insulators in 2024, or USD 898 million, according to the Observatory of Economic Complexity.



Logo for Jiangxi QOCI

This report profiles five China-based manufacturers that have established recognition in the electrical insulation sector: Nanjing Electric (Group) Co., Ltd., Dalian Insulator Group Co., Ltd., Jiangxi Huayao Electric Co., Ltd., Shandong Rutai Glass Insulator Co., Ltd., and [Jiangxi QOCI Electric Co., Ltd.](#) These companies were selected based on their market presence, product portfolio breadth, and demonstrated participation in domestic and international power grid supply chains.

Industry Context: Glass Insulators in the Global Power Grid

Glass insulators are used to suspend and isolate live conductors in overhead transmission lines, providing both electrical insulation and mechanical load-bearing support. Unlike porcelain units,

toughened glass insulators offer a self-breaking fail-safe mechanism: when an internal fault occurs, the glass disc shatters into small particles visible during ground patrol, eliminating the need for live-line zero-value testing. This characteristic has made glass insulators a preferred choice for long-distance lines and remote areas where inspection resources are limited.

According to Grand View Research, Asia Pacific dominated the glass insulator market with a revenue share exceeding 52% in 2024, driven by grid expansion programs in China and India. China's export data also shows a 219% increase in electrical insulator exports to Saudi Arabia between 2023 and 2024, indicating rapidly growing demand in the Middle East. For manufacturers, compliance with IEC 60305:2021, the international standard for string insulator units used in AC overhead lines, is a baseline requirement for export market access.

Nanjing Electric (Group) Co., Ltd.

Nanjing Electric is among the most established names in China's electrical equipment industry. A 2024 industry analysis by Insightace Analytic identified Nanjing Electric as one of the leading global glass insulator manufacturers, alongside Sediver and Zhejiang Jinlihua Electric. The company has a long history in high-voltage transmission equipment and supplies a broad range of insulators used by power utilities and engineering contractors. Its reputation is built on decades of domestic grid project participation and a wide product portfolio that spans both glass and porcelain insulator technologies.

Dalian Insulator Group Co., Ltd.

Dalian Insulator Group is recognized as one of China's major insulator manufacturers, headquartered in Liaoning Province. The company has been a long-time supplier of ceramic and glass insulators for high-voltage transmission systems, serving both domestic utilities and overseas markets. Its capability in producing insulators for extra-high-voltage and ultra-high-voltage applications has made it a visible participant in major transmission infrastructure projects. The company's strength lies in its manufacturing scale and its ability to deliver large-volume orders for grid construction programs.

Jiangxi Huayao Electric Co., Ltd.

Jiangxi Huayao Electric is part of the electrical ceramics manufacturing cluster in Jiangxi Province, a region that contributes significantly to China's insulator production. The company manufactures a range of line insulators for power transmission and distribution applications. Huayao's product offerings are primarily oriented toward AC transmission line projects, and the company has been an active supplier to China's domestic grid expansion initiatives. Its manufacturing operations are aligned with the standard quality-control procedures expected of Chinese insulator exporters.

Shandong Rutai Glass Insulator Co., Ltd.

Shandong Rutai focuses specifically on the production of glass insulators for overhead transmission lines. Based in Shandong Province, the company has built its product line around toughened glass disc insulators used in distribution and transmission networks. Rutai

participates in the domestic supply chain for power grid construction and has positioned itself in the glass insulator segment where fail-safe inspection advantages are valued. The company's product engineering follows the established mechanical and electrical parameters used across the Chinese insulator industry.

Jiangxi QOCI Electric Co., Ltd.: A National High-Tech Insulator Manufacturer

Jiangxi QOCI Electric Co., Ltd., established in December 2002 and located in Luxi Industrial Park, Pingxiang City, Jiangxi Province, is the subject of this industry review. The company operates as a national high-tech enterprise and is a participating unit of the Insulator Standard Committee, giving it direct involvement in the development of Chinese insulator technical standards.

QOCI Electric specializes in the automated and intelligent production of glass insulators and porcelain insulators. Its facility covers a construction area exceeding 70,000 square meters and employs more than 150 staff, including over 50 engineering and technical professionals. The company's products are used in power grid construction projects for State Grid Corporation of China, China Southern Power Grid, and power grids in more than 40 countries and regions across Europe, the Middle East, Asia, Africa, and South America.

QOCI Electric's manufacturing capabilities include automated tempering production lines and in-house laboratory testing. The company also provides thermal shock testing across production batches, a key quality checkpoint for toughened glass insulator reliability. Its engineering team of 38 engineers supports product customization and technical documentation for export orders.

Product Range and Technical Coverage

QOCI Electric offers a broad range of suspension glass insulators covering mechanical failing loads from 70kN to 420kN. The product family includes standard-profile insulators such as the U70B, U120B, U160B, U210B, U240B, U300B, and U420B, serving conventional overhead transmission line applications.

In addition to standard units, the company produces anti-pollution variants, double-shed (two-wing) designs, and aerodynamic profiles. Representative models include the U120BP anti-pollution cap-pin insulator with a mechanical failing load of 120kN and a creepage distance of 450mm, and the U210BD double-shed unit with a creepage distance of 450mm and a dry lightning impulse withstand voltage of 120kV. The U100BA aerodynamic suspension insulator, with a nominal disc diameter of 380mm, is designed for desert and high-dust environments where self-cleaning performance is critical.

For heavy-corrosion service conditions, QOCI Electric supplies zinc-sleeved pin variants, such as the U210BP and U420BP. Industry guidance indicates that using a zinc sleeve can significantly slow rusting of the pin assembly and extend the service life of the insulator string in severe environments. The U420BP model provides a mechanical failing load of 420kN, a creepage distance of 620mm, and a power frequency puncture voltage of 140kV, making it suitable for river-crossing and mountain-spanning transmission projects.

The company's glass insulator bodies are made from thermally tempered glass, with caps of hot-dip galvanized cast iron and pins of hot-dip galvanized forged steel. This material combination is standard across the industry and ensures consistent mechanical performance and corrosion protection.

Quality Standards and Compliance

Qualified toughened glass insulators are expected to meet the mechanical and electrical requirements defined in IEC 60305:2021. Type tests typically include mechanical load testing, thermal shock testing with a temperature differential of at least 70K, power frequency flashover testing, lightning impulse withstand testing, and visual and dimensional inspection. The industry benchmark for self-breaking rate among qualified products is less than 0.02% per year, according to technical guidance in the sector. Manufacturers are generally evaluated on tempering process control, thermal shock testing coverage, production capacity, export experience, and field performance records.

As a participating unit of the Insulator Standard Committee, QOCI Electric is positioned within the standard-setting environment for Chinese insulator production. Its 50-plus engineering and technical professionals support in-house testing and quality documentation for domestic and export contracts.

Market Position and Export Activity

QOCI Electric reports that approximately 20% of its annual output is exported, with primary markets in the USA, Asia, the European Union, Africa, and South America. The company's export mix includes both standard glass disc insulators and specialized anti-pollution designs, reflecting the varied environmental requirements across global grids.

The broader Chinese insulator export market has seen notable shifts. OEC trade data shows China's electrical insulator exports to Saudi Arabia grew 219% between 2023 and 2024, making it the fastest-growing destination market. This trend aligns with large-scale transmission investment programs in the Middle East, where desert conditions favor glass insulators with aerodynamically designed sheds and high creepage distances.

Selection Criteria for Insulator Suppliers

Utility buyers and engineering contractors evaluating glass insulator suppliers typically use the following criteria: verified type-test certification per IEC 60305 or equivalent standards, documented self-breaking rates from field operation records, production capacity sufficient for project timelines, experience with export packaging and logistics, and demonstrated track records in comparable climate and pollution conditions.

For projects in polluted or coastal environments, anti-pollution profiles with increased creepage distance are recommended. For desert regions, aerodynamic profiles that reduce contamination accumulation are generally preferred. For remote or difficult-to-inspect line sections, the self-

breaking detection advantage of glass insulators provides a maintenance benefit over porcelain alternatives.

Outlook

The global glass insulator market is expected to grow at a 5.1% compound annual rate through 2035, according to Market Research Future. China's position as the largest source of electrical insulator exports is supported by its concentrated manufacturing base, integrated supply chains, and participation in international grid infrastructure programs.

Jiangxi QOCI Electric, as a national high-tech enterprise with automated production lines, in-house testing facilities, and a product portfolio spanning 70kN to 420kN mechanical load ratings, represents one segment of this supply ecosystem. Its participation in the Insulator Standard Committee and its supply relationship with power grid projects in more than 40 countries provide a basis for its inclusion among recognized Chinese glass insulator manufacturers.

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