Stringent quality control is the cornerstone of Seraphim’s manufacturing. Our customers have come to expect uncompromising quality in our products. To meet this expectation of high quality, we continue to invest in state-of-the-art equipment and professional training for our employees. We are proud of the quality of our products and their reliable performance even in the most extreme conditions.

Through rapid and steady development, Seraphim has expanded its solar module production capacity to 5GW. In the meantime, Seraphim devotes itself into developing the most innovative photovoltaic technology for a greener future. Since its foundation, Seraphim has been continuously providing excellent quality, high efficiency and high ROI solar products to customers worldwide.

We have earned our reputation as an industry-leading solar product manufacturer largely due to the products’ excellent performance. We understand the importance of ensuring customer satisfaction. With over 20 local offices and 2500 employees globally, Seraphim is dedicated to providing efficient support and excellent customer services in all regions.

Over the years, Seraphim has established itself as a leader in solar industry, a pioneer in technical innovation, and a perfectionist in quality assurance. Seraphim has been continuously challenging itself to develop new technologies, higher efficiency products, and provide better services. Seraphim has been certified to international performance and safety standards by independent third-party laboratories. Seraphim also actively participates at a local level by coaching and providing the public with economic and green solutions.

It’s a bright future indeed. What we are doing is shifting the future.
A WORLD-CLASS SOLAR MODULE MANUFACTURER

Since its foundation in 2011, Seraphim has accomplished significant achievements in growth and innovation. Seraphim’s core belief is that innovation is the key driver behind growth. Our dedication towards innovation has allowed us to outpace most of our competitors. Seraphim is listed as Tier 1 solar module maker by BNEF, Top Performer by DNV GL. With a global capacity of 5GW, Seraphim has been serving worldwide customers with high-quality products and professional services. By the end of 2018, more than 6GW of Seraphim products has been widely applied in over 40 countries.
As one of the world’s leading manufacturers of photovoltaic products, Seraphim focuses on solar technology innovation. In 2013, we added in-house research facilities that specialize in R&D and product testing for better development, new material testing, client customization, and periodic sample testing, etc. Located in the scenic Chinese city of Changzhou, Seraphim’s laboratory covers an area of 722 square meters. Equipped with German-made electrical performance testers, a walk-in climate simulation chamber, and over 20 other instruments for PV testing and certified with over 20 engineers, 20 testing specialists, and 3 experienced managers, the laboratory now has complete PV R&D and testing capability.

The laboratory has been recognized as CSA witnessed laboratory, CNAS certified in-house laboratory, CTC authorized testing laboratory, TÜV SÜD assessed TMP and CTF laboratory. This allows Seraphim to shorten the certification period and accelerate the speed of new product release.

**World-class R&D Center**

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**Small Innovations in Technology, Big Benefits for Your Business**

With a full array of exciting solar energy technologies, Seraphim’s strong innovation continues to help customers to meet their goals. From utilities to commercial and industrial to residential customers, we work with the unique needs of each customer, site and application to deliver the right products and services. Seraphim has been investing continually in solar product development-including laboratory equipment upgrades and adding to our R&D engineering staff. Our emphasis on product innovation has allowed us to remain at the forefront of solar technology. Seraphim’s small steps combine together to make a big leap forward for our clients.

- Over 100 Patents
- Up to 21.1% Module Efficiency
- Over 100 Global R&D Engineers
- Certified in-house Laboratory by CSA, CNAS, CTC, TÜV TMP and TÜV CTF

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SMARTER MANUFACTURING, SMARTER CHOICE

Highly automated production lines enable Seraphim to supply modules with high quality, fast delivery and low cost.

Seraphim positions itself as a leader in the solar industry not only in leading-edge product performance, but also in manufacturing equipment, quality control, and customer service. Seraphim strives to meet all of clients’ expectations by utilizing fully automated manufacturing facilities, advanced quality control systems, and self-developed fully transparent quality management system.
Seraphim employs strict manufacturing management and end-to-end quality control. With an in-house developed ERP system, we track every production step of every module component from incoming material quality control, to online production, OBA test and delivery status, etc. The ERP system implements a unique bar code for each module component. Information such as raw material suppliers, production workers, quality testing results, and production details are all accessible online through our ERP system. This data will be kept on our server for client’s access. Our product monitoring system allows us to track and take responsibility for product quality. It also enables customers to log in via Internet to retrieve real-time module production data. In the long run, this enables us to track back products’ records in a database, which gives us the ability to further improve product quality.

**REAL-TIME MONITORED AND RECORDED**

Seraphim’s ever-improving highly automated production lines enable us to supply modules with high quality, fast delivery and low cost. To improve production reliability and efficiency, Seraphim works closely with equipment suppliers to develop customized automated production lines. As a result, we have the most automated production lines in the PV industry. Seraphim has also dedicated extensive resources to improving production efficiency and fluidity. Roughly 2 MW modules are produced annually by each Seraphim worker, which is 50% higher than our competitors.

**MODULARIZED FULLY AUTOMATED PRODUCTION LINES ENABLE FAST DELIVERY AND COST SAVINGS**

- 10% Lower production cost
- 10% Higher equipment effectiveness
- 40+ Patents on production process optimization
- 99.8% Good product yield rate
- 24 * 7 Real-time online monitoring
- 35% Higher production efficiency
- 99.8% Good product yield rate
- 24 * 7 Real-time online monitoring
- 35% Higher production efficiency

**BENEFITS FOR SERAPHIM**

- Simplify production process, improve production efficiency
- Enhance product quality while dramatically reduce cost
- Improve utilization rate of corporate resources and assets
- Guarantee customer trust with transparent and traceable production process
- Improve customer satisfaction through fast delivery and high quality

**ADDED VALUE FOR CUSTOMER**

- Customers can access real-time production data including BOM detail, EL report, operator, etc.
- Real-time update of the production status, delivery specifics, etc. of your order.
- A unique bar code enables you to track back all the information related to your order.
- Visual access to real-time workshop floor monitor recordings via our ERP system.
HIGH QUALITY PRODUCTS COME FROM STRINGENT QUALITY CONTROL SYSTEM

Stringent quality control is the cornerstone of Seraphim’s manufacturing. Our customers have come to expect uncompromising quality in our products. To meet this expectation of high quality, we continue to invest in state-of-the-art equipment and professional training for our employees. We are proud of our product quality and their reliable performance even in the most extreme conditions.
Seraphim has received certifications for Quality Management System (ISO 9001:2008), Environment Management System (ISO 14001:2004) and Occupational Health and Safety Management System (OHSAS 18001:2007) from both DNV GL and GZCC.

Beyond ISO 9001, Seraphim also applied for the national “GB T19580 2012 Criteria for Performance Excellence”. This regulates not only product quality, but also production waste, environmental burden, management foresight, etc., which are the necessities for an “excellent” company.
Seraphim passed the strictest accelerated stress testing and characterization under DNV GL PVEL, LLC’s (DNV GL) Product Qualification Program (PQP). The PQP is a comprehensive evaluation of environmental sensitivities and degradation mechanisms of PV module designs.

In addition, Seraphim’s module products have received the China Quality Certification Center’s (“CQC”) Top Runner Program level-one energy efficiency certification.

**PROVEN HIGHER MODULE EFFICIENCY AND OUTPUT**

Thresher test (300% the IEC standards) includes a series of tests for thermal cycling, damp heat, PID, UV, humidity freeze and hot spot. It is designed to test whether or not modules can maintain their power output during adverse conditions throughout their lifetime.

**THREE TIMES MORE THAN INDUSTRY STANDARDS**

**IEC 61215 AND IEC 61730**

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RELIABLE AND HIGH EFFICIENT
MODULES GUARANTEE PROFITS

Seraphim specializes in module production. All of our products have been certified by professional third-party testing bodies. But that’s not enough. We apply stricter standards to make sure they remain functional even under the most extreme conditions.

PRODUCT CERTIFICATES

[Image of product certificates]
DIVERSIFIED SOLAR MODULES MEET DIFFERENT NEEDS

Seraphim produces a range of PV modules that are ideal for all types of installations: residential, commercial, industrial and utility. Also, we offer a rich module portfolio to meet the diversified needs of customers, including Eclipse™, the world’s first certified high efficiency module using shingled technology, Blade™, and dual-glass series for desert, coastal area and agricultural hybrid etc.

**EC UPSE™**
- Up to 21.7% module efficiency
- 28% more power output
- More than 70% BOS cost saving
- 15% greater MPP for better energy output
- Dramatically reduced hot spot effect
- Excellent reliability and durability
- Beautifully designed

**BLADE™**
- Less mismatch losses
- Less overall power loss
- Higher yield due to better shade tolerance
- Reduces BOS and installation cost
- Reduces hot spot effect

**SMART SOLUITIONS**
- Up to 25% more output than DC array
- Enhanced reliability and durability
- Aesthetically pleasing

**BLADE BIFACIAL**
- 1.5-2% more energy generation
- 0% mismatch losses
- Excellent transportability and durability
- Less mismatch and parallel design reduces shading impact
- Ideal for high reflective areas

**EC UPSE MINI**
- Ribbon free, smaller corners, lower internal resistance
- Higher efficiency, higher output
- Beautifully designed, perfect visual enjoyment
- Significantly reduced hot-spot effect
- Flexible design

**STANDARD SERIES**
- Optimized power output
- 1000V DC system
- Top ranked in Photon’s Outdoor Test
- Superior stability and durability
- 1500V modules available

- 10-30% more energy generation
- Dual glass structure reduces micro-cracks, snail trails, and UV aging
- PID-free, superior stability and durability
- Less mismatch and parallel design reduces shading impact
- Ideal for high reflective areas
Seraphim provides full range of services even before an order is placed. You can enjoy caring and professional technology consultation, fully transparent ERP, as well as local offices and online instant response system. This seamless service chain will allow you to worry less and enjoy the sunshine.

**SEAMLESS SERVICES LET YOU ENJOY THE SUNSHINE**

Seraphim provides full range of services even before an order is placed. You can enjoy caring and professional technology consultation, fully transparent ERP, as well as local offices and online instant response system. This seamless service chain will allow you to worry less and enjoy the sunshine.

- **24 * 7 Real-time Monitoring**
  - You are able to observe production process via our ERP system online

- **48-hour Response**
  - Timely response warranty calls

- **Local Offices**
  - Global network ensures rapid on-site support

- **Technology Support**
  - Professional technical team helps maximize the benefits of your projects

- **Financing Service**
  - Professional bankability support and assistance

- **Marketing Support**
  - Co-marketing to enhance your brand awareness

- **Tailor-made Evaluations and Recommendations**
  - Experienced sales and technical staff provide professional consultation

- **Customized Service**
  - Customized service to meet your unique needs

- **PV Policy Consultation**
  - Experienced team of analysts provides up-to-date analysis and forecasts
Our approach to corporate citizenship is driven by understanding the role we play in solving the world’s energy problems. We believe we can build a sustainable business by helping protect and nurture valuable resources on which we all depend. We share our vision with our customers and employees. “Shifting the Future” is our dream.

At Seraphim, we not only care about energy problems, but also the future of all mankind. By providing clean and affordable solar energy, we are helping protect the environment for future generations. As the old saying goes, “We do not inherit the Earth from our ancestors, we borrow it from our children.”

In 2013, Seraphim donated 8kW off-grid solar PV systems to two Tibetan primary schools located in remote areas of the Tibet Plateau. These two village primary schools, although accessible via transportation infrastructure, but were also inaccessible to the national grid. These off-grid systems help running the basic education for the students. Since then, Seraphim teamed up with the Tibet Care Associations to continuously offer our help. In 2018, Seraphim and “iHEARu Charity Fund” reached a long-term partnership which primarily targets the “Cognitive Center” project for hearing-impaired children.