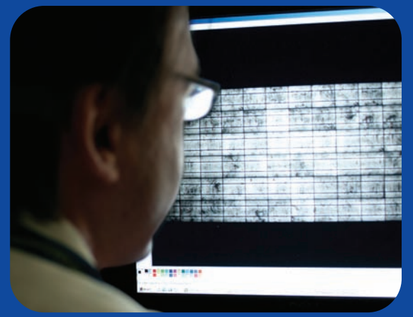
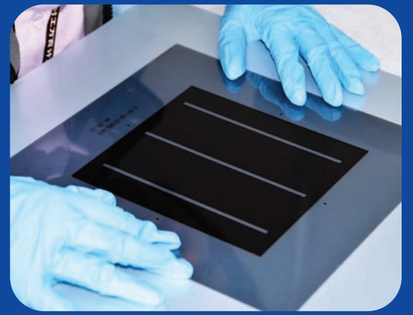

DON'T
WASTE
YOUR
ENERGY
ON ANYTHING
LESS
MOTECH





HIGH PERFORMANCE SOLAR FOR HIGH PERFORMANCE ENERGY NEEDS

MOTECH

DEDICATED TO PROVIDING THE NEXT GENERATION OF ENERGY

- Making energy clean by harnessing the most abundant renewable energy source, the Sun
- Providing a future with boundless possibilities
- Renewing the Earth for future generations

The world's delicate ecosystem is unintentionally damaged by the use of fossil-fuels. Even though the sun is the most abundant renewable energy source, less than 1% of the energy produced worldwide is from solar sources. At MOTECH, with our full range of solar product solutions, we want to encourage and provide you with a more sustainable world.

Vision

Our vision is to become a worldwide leader in the renewable energy and energy efficiency industry by providing products and services of high quality and value.

Mission

Our mission is to promote a clean and sustainable environment and provide new energy solutions with increasing economies of scale.

MOVE THE FUTURE

BUILDING MOMENTUM

1981
- MOTECH Industries, Inc. was formed

1997
- MOTECH Solar Division established

2000
- First company in Taiwan to produce silicon solar cells

2002
- MOTECH Power Division established

2003
- Publically listed on the Taiwan OTC market

2004
- Internationally acknowledged as one of the top 10 crystalline silicon solar cell manufacturers in the world

2006
- Developed and began manufacturing solar inverters

2008
- SNE (Fab. 3) began mass production of solar cells in Kunshan, China

2009
- Strategic partnership with TSMC
- Solar cells certified for REACH-SVHC compliance

2010
- AE Polysilicon began mass production of polysilicon with FBR process
- AE Polysilicon signed a Stock Purchase Agreement with TOTAL Gas & Power Ventures S.A.S.
- Established a joint venture, ITOGUMI-MOTECH, with ITOGUMI Construction for model manufacturing in Japan
- Acquired GE Energy's solar module operation in Delaware, creating MOTECH AMERICAS LLC

2011
- Joined PV Cycle to support end-of-life module recycling
- Awarded Outstanding Photonic Product Award from PIDA in Taiwan

2012
- Power+ Module Series Introduced, most powerful multicrystalline silicon module in the industry

Today
- Joined MDV-SEIA
- Received the highest GRI Rating (A+) for its Corporate Responsibility Report

WELL GROUNDED

For over 10 years, MOTECH has utilized innovative techniques to specialize and improve upon the standards of silicon solar cell technology. These efforts have resulted in increased efficiency and higher quality in our core solar cell products. MOTECH also provides a full array of value-added advantages from modules to solar inverters and systems. The ability to provide these high performance products to our customers is due to the open collaboration with our customers, and the experience and dedication of the people at MOTECH to meet all challenges.

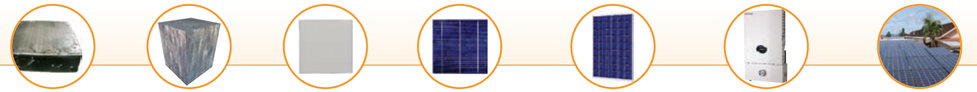
Ensuring Longevity and Value

Solar as a renewable energy source is the most promising because the earth's most abundant source of energy is waiting for us to harvest it for all our future needs. While the sun's energy will be constant for eons, the companies in this industry may not. Not many companies can claim that they have been "solar-centric" for more than 5 years, while MOTECH has remained a steady force in the solar industry for over 15 years.

Over these years, we have been expanding our solar expertise across the value chain so that we can provide our customers with all the products needed to take full advantage of the sun's energy. Our unique knowledge of cells, modules, inverters, and systems gives us the flexibility to provide customers with a diverse set of solar products while expertly integrating MOTECH's high standards for quality throughout the value chain. Our customers have come to associate the MOTECH name with longevity and value in the solar industry.

KEY COMPONENTS

Intelligently integrated for the global solar PV industry



Ingot — **Block** — **Wafer** — **Cell** — **Module** — **Inverter** — **System**

MOTECH processes and slices its own ingots, blocks and wafers for better quality and conversion efficiency.

MOTECH is one of the top ten cell manufacturers in the world.

MOTECH manufactures PV modules backed by a 25-year progressive linear warranty.

MOTECH produces one of the most efficient inverter on CEC inverter list.

MOTECH is the largest PV system integrator in Taiwan.

Continuously improving downstream distribution

- MOTECH AMERICAS LLC markets our high quality modules within the U.S. and worldwide while fulfilling the American Recovery and Reinvestment Act (ARRA) requirement by being made in the U.S.A.
- Japan continues to be a solar PV market with great potential. ITOGUMI-MOTECH continues to strength MOTECH's position in the Japanese market by providing premium modules with regional cost advantages.
- MOTECH (Suzhou) Renewable Energy Co. LTD. (SNE) in China manufactures our modules for the local and global markets while simultaneously educating the area about solar as a renewable energy source to promote cleaner forms of energy for the country.

Our customers have experienced the benefits of our efforts by way of cost advantages, solar cell efficiencies, maximum kWh yield of our modules, and reduced lead times, while still enjoying superior quality and system performance—from purchase to installation.

TRUST

Measure us by our accomplishments

We believe that following through with what we promise to our customers and continuing to fulfill our commitments to them are what defines us. By taking the time to carefully listen to and understand the needs of our customers, we are able to deliver better solutions for today and a greener tomorrow.

GLOBAL REACH, SERVICE, CAPACITY

- **Global business scope with local presence**
- **Advanced customer support**
- **Broader product portfolio**

A major expansion came in early 2010 when MOTECH acquired GE Energy's module business in the U.S.A. to form MOTECH AMERICAS LLC in Delaware. Another significant expansion was the partnership with ITOGUMI in Japan where we formed ITOGUMI-MOTECH.

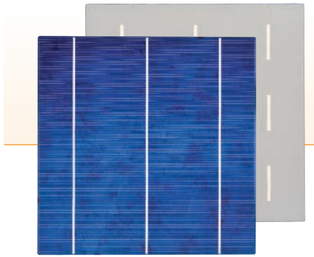
By bringing all these segments under one roof, MOTECH has formed a well-established global business scope with localized intelligence teams that provide better customer service and response to each regional customer's needs.

MOTECH has never settled for the status quo. Our solar cell capacity and production has increased exponentially since the first cell came off our production lines. We will continue growing in terms of capacity and improved cell lines, anticipating the needs of the market, to the benefit of our customers. The addition of solar inverters and solar modules to our product portfolio is to provide additional value options to our customers.

OPTIMAL EFFICIENCY

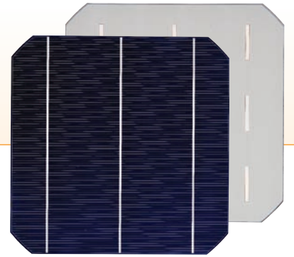
Cells-

Multicrystalline I-Cells
IM156
IM156B3
Efficiency: 16.4 - 18.2%



Monocrystalline X-Cells

XS156B3
Efficiency: 18.1 - 19.6%



MORE ENERGY

Inverters-

MOTECH designs and manufactures PV inverters for the European and U.S. markets. Product offerings include transformerless inverters and transformer integrated PV inverters, with power ratings ranging from 3 kW to 17 kW. The target applications of these efficient solar inverters are residential and light-commercial PV installations.

HIGHER POWER

Modules-

MOTECH offers modules ranging from 160 watt to 320 watt power output for commercial and residential applications. Our modules are certified for 600 volt and 1000 volt applications for project development in almost any country. With Motech cells and highly refined module manufacturing standards, Motech modules are guaranteed to perform with excellence and durability.

Major Module Products

- IM72 Series Photovoltaic Module
  72 MOTECH multicrystalline MOTECH solar cells connected in series
  Peak Power: 285-310 Wp
- IM60 Series Photovoltaic Module
  60 MOTECH multicrystalline MOTECH solar cells connected in series
  Peak Power: 235-260 Wp
- IM54 Series Photovoltaic Module
  54 MOTECH multicrystalline MOTECH solar cells connected in series
  Peak Power: 210-220 Wp

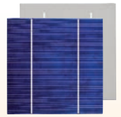
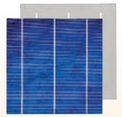
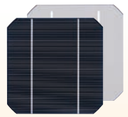
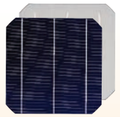
MORE SUSTAINABLE

Systems-

Location: Pingtung, Taiwan
Type: 2MW sized stystem

MOTECH CELLS

MOTECH is constantly advancing our cell technology to bring our customers world class solar cells. We have full access across the supply chain from polysilicon, wafer to cell to give you more reliability and better quality products. In addition to our long-years of experience and technical expertise, our solar cell has been recognized as one of the best in the world.

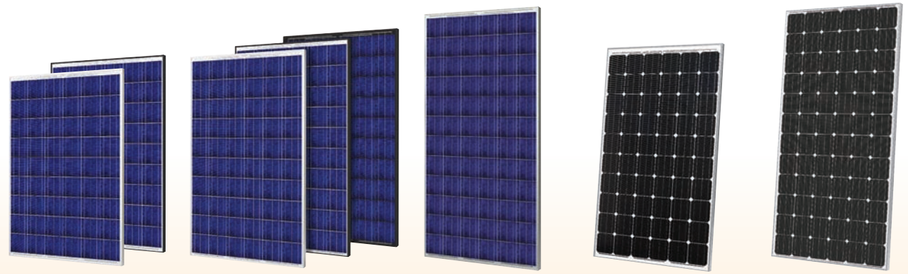
	Multicrystalline Solar Cells		Monocrystalline Solar Cells	
				
Model name	IM156	IM156B3	XS156	XS156B3
Dimension	156mm x 156mm (± 0.5mm)	156mm x 156mm (± 0.5mm)	156mm x 156mm (± 0.5mm)	156mm x 156mm (± 0.5mm)
Output per cell	3.99W - 4.43W	3.99W - 4.43W	4.32W - 4.68W	4.32W - 4.68W
Efficiency	16.4% - 18.2%	16.4% - 18.2%	18.1% - 19.6%	18.1% - 19.6%
Thickness (Si)	200μm ±20μm, 180μm ± 20μm	200μm ±20μm, 180μm ± 20μm	200μm ±20μm	200μm ±20μm
Front	Two 1.8mm silver busbars	Three 1.4mm silver busbars	Two 1.8 mm silver busbars	Three 1.4mm silver busbars
Back	Two 3.1mm (silver/aluminum) discontinuous soldering pads	Three 2.5mm (silver/aluminum discontinuous soldering pads	Two 3.1mm (silver/aluminum) discontinuous soldering pads	Three 2.5mm (silver/aluminum discontinuous soldering pads

Features & Benefits

- Precision cell efficiency sorting procedures
- Quality control of wafer source and quality
- High cell efficiency & superior performance in high temperature and low light conditions
- Proven long-term reliability with strict soldering and adhesion tests
- Stringent quality and visual appearance requirements

MOTECH MODULES

MOTECH offers state-of-the-art PV modules up to 320 watt power output for residential, commercial and solar farm applications, and are certified in most countries, including Europe, Japan and the U.S. But certification does not equal quality, so Motech modules undergo rigorous testing, guaranteeing that they will perform with excellence.



Model name	IM54 Series	IM60 and IM60+ Series	IM72 and IM72+ Series	XS60 and XS60+ Series	XS72 and XS72+ Series
Nominal Power	210W - 220W	235W - 260W	285W - 310W	245W - 265W	300W - 320W
Max. System Voltage*	600V/1000V	600V/1000V	600V/1000V	600V/1000V	600V/1000V
Format	1492mm x 992mm x 50mm	1650mm x 992mm x 50mm	1966mm x 992mm x 50mm	1650mm x 992mm x 50mm	1966mm x 992mm x 50mm
Weight	18.2kg (40.1lb)	19.9kg (43.9lb)	27.2kg (60.0lb)	19.9kg (43.9lb)	27.2kg (60.0lb)
Snow/wind load	5400Pa	5400Pa	5400Pa	5400Pa	5400Pa
Junction Box*	IP65 rated	IP65 rated	IP65 rated	IP65 rated	IP65 rated

Features & Benefits

- Tight appearance criteria for module aesthetics
- Robust mechanical assembly for handling heavy loads and high impact weather conditions
- Strict internal tests for reliability & durability
- Wider spectral response for higher performance output
- Stable annual degradation rate for long term investment
- Easy installation and minimum maintenance required

MOTECH INVERTERS

MOTECH Inverters are ideal for residential and commercial applications. Our products feature an innovative design which enables greater flexibility for system designers and to allow easier installation and service for system installers.

				
Product	PVMate 10NE PVMate 12NE PVMate 15NE PVMate 17NE	PVMate 3300MS-D PVMate 3800MS-D PVMate 4600MS-D	PVMate 6500U PVMate 7500U	PVMate 3000U PVMate 3840U PVMate 4000U PVMate 5300U PVMate 5300U
Regional availability	Europe, Asia, Oceania	Europe, Asia, Oceania	Americas, Asia	Americas, Asia
Output power	10kW - 17kW	3300W - 4600W	6500W - 7500W	3000W - 5300W
Grid Voltage	400VAC x 3 / 320VAC ~ 460VAC	230VAC	208VAC, 240VAC, 277VAC	208VAC, 240VAC
Phase	3-phase balanced output	Single phase	Split phase or single phase	Split phase or single phase 240
Number of MPPT	2	1 ~ 3	1	1
Maximum efficiency	97.4%*	95.4%*	96.0%†	96.0%†
Certifications	VDE 0126-1-1, VDE AR-N 4105, G59/2, CQC, AS3100, AS4777.2/3	EN 55022 (Class B), EN 61000-6-2/3, CISPR 22:2008, EN 61000-3-2/3/11/12, EN 50178, AS3100, AS4777.2/3, DK5940 / Enel Connections Guide 2008, Section F PV501(2008), RD1663, RD 1699/2011, VDE 0126-1-1, VDE-AR-N 4105, G59/2, IEC60529(IP65), 2002/95/EC (RoHS), AS/NZS 61000.6.3	UL 1741, IEEE 1547, FCC part 15 subpart B, IEC60529(IP54), CSA C22.2 No.107.1-01, CEC listing	UL 1741, IEEE 1547(.1), FCC part 15 subpart B, CSA C22.2 No.107.1-01, CEC listing

* European Efficiency
† CEC Efficiency

USING MODERN TECHNOLOGY TO MAKE A BRIGHTER, MORE SUSTAINABLE FUTURE

At MOTECH, we believe improving the health of our planet is not an option, but a real necessity. We stand by our commitment that modern technology can create a sustainable world and be a contributing force to society.

Making a brighter, greener future is all about the energy choices we make today and having the determination to give up our dependence on fossil fuels. These choices - collectively as countries, purposefully as corporations, and meaningfully as individuals - are how we can transform our world.

RESPONSIBLE

Employees and Environment

Caring for our employees and our environment is not something we take lightly. We are constantly working to minimize the use of toxic substances. MOTECH solar cells are certified RoHS (Restriction of Hazardous Substances) and REACH-SVHC (REACH—Substances of Very High Concern) compliant.

MOTECH continuously evaluates every stage of the PV Life Cycle in order to determine if there are new ways to reduce our environmental impact. We use Life Cycle Assessment (LCA) as a tool to not only reduce cost, but measure the impact our manufacturing process has on the environment and maintain an Eco-Balance throughout the process.

In August 2010, MOTECH's IM156 cell was verified SGS Taiwan, Ltd. as the first ever multicrystalline solar cell to gain PAS 2050:2008 Carbon Footprint Verification in the world. Our Customers have a unique opportunity to take advantage of our endeavor to calculate their own PV module system's carbon footprint.

All of our efforts ensure that we have taken extensive precautions in the production of our cells to protect our workers and the environment, while still providing customers with the highest quality products.

COMMUNITY

Taking every opportunity to give back to our communities—from Taiwan, Mainland China, to the U.S.A.

Taiwan

In Taiwan, MOTECH HQ sponsors annual education-based initiatives to support solar education and growth in a selection of novel ways:

- The annual "Solar Family Camp" is co-sponsored with Taiwan universities to give students an opportunity to participate in hands-on scientific challenges. This level of direct involvement creates a meaningful understanding for students to grasp innovation as it pertains to fostering solar energy development.
- Co-organized with the National Science and Technology Museum, the "MOTECH Cup – PV Application Design Competition" gives qualified and sponsored participants an opportunity to create innovative photovoltaic (PV) solar modules. The objective of the competition is to encourage college and university students to think outside the box and exercise limitless creative energy in PV application.
- Complimentary "Interdisciplinary Science Education" seminars featuring experts from a variety of topics of Popular Science Education, encourage family engagement in children's science learning at home, in school and throughout their community.

Mainland China

In China, MOTECH SNE coordinated with local governments to educate the communities on "energy-savings and emissions reduction" as a way of life. These local governments also brought in middle school students to SNE's Laboratory to learn about renewable and solar energy. In addition, SNE has awarded ten Kunshan High School students educational scholarships in an effort to prepare the next generation of young minds for the future. MOTECH also donated RMB 550,000 and RMB 600,000 to Yushu and Wenchuan earthquake-stricken areas for relief efforts in 2008 and 2010.

U.S.A.

MOTECH AMERICAS works on multiple fronts to serve a leading role as corporate citizen, founded in programs benefitting community initiatives, and in working to communicate the value we contribute toward promoting clean, renewable energy.

- Solar and Cycling are a match in promoting renewable, healthy living. In 2012 and 2013, MOTECH AMERICAS sponsored the Wilmington Grand Prix, a national cycling event that attracts pros and amateurs alike to the Wilmington, Delaware area, and benefits the Food Bank of Delaware. During the weekend-long event, visitors have an opportunity to visit MOTECH's displays to inquire about solar, its benefits, and local manufacturing.
- In 2011, MOTECH AMERICAS conducted a rare open house, bringing to light how solar products should be tested for quality and long term reliability, resulting in maximum productivity. MOTECH's seasoned engineers showed visitors some of the extensive testing that is conducted in the in-house laboratory and held "Quality Q&A Sessions".
- To inspire our next generation with solar, MOTECH AMERICAS donated a 3kW system to the Wilmington, Delaware's Children's Museum to help power the facility and reduce their carbon footprint. In conjunction with the array, MOTECH AMERICAS provided an interactive display inside the museum to teach young minds the science of solar energy, and the continuing efforts being made to ensure a sustainable world for their future.

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