

PHOTOVOLTAIC MODULES

*European
quality,
best prices*

Maximum quality, efficiency and reliability



www.zytechsolar.com

ZYTECH PHOTOVOLTAIC MODULES

Maximum quality, efficiency and reliability



MODULES WITH THE BEST VALUE FOR QUALITY AND AFTER-SALES SERVICE

- Extremely European high quality.
- Efficiency and robustness.
- Competitive prices.
- Owned Manufacturing plants in India and Spain, offers a fast and effective after-sales service.

IN-HOUSE MANUFACTURING

Zytech photovoltaic modules are manufactured with monocrystalline and polycrystalline silicon cells on our own production lines in Europe and India and are subjected to the most stringent quality controls. The resources devoted to R&D for ongoing product improvement, specialized manpower, state-of-the-art machinery and rigorous quality controls allow us to guarantee a European quality product at the best price.



The quality of Zytech modules has been confirmed by the inspection processes performed by GARRIGUES, an internationally renowned company which performs totally independent quality audits on Zytech's standard controls.

Zytech is bankable with most banks thanks to its long experience as PV Solar manufacturer in Europe, since 2005.



- Specialist manpower
- State-of-the-art machinery
- Quality controls and certificates



Zytech photovoltaic modules are tested in laboratories authorized in accordance with the TUV IEC 61215, UL 1000V standards. Suitability for areas with significant ice and snow accumulation is tested by progressively applying loads from 0 to 5.4 kN/m2.

Zytech Solar is one of the biggest competitive manufacturers of Solar PV Modules in Europe since 2005, with headquarters in Spain. We have stock and we can offer very competitive prices from our own manufacturing plants.

Our high-efficiency module production line adapts to the specific needs of each customer. Excellent performance in low light conditions.

Power output is guaranteed for 25 years and they are covered by a 10-year limited warranty against materials and manufacturing defects. Our linear power warranty assures 97% of the power of our modules during the first year.

However, our commitment goes much further than that: Starting with the second year and up to the fifteenth year, the power of our modules is guaranteed with a degradation of less than or equal to 0.7% per year.

This means that you may know the projected production of your installation in advance and this way, you may also calculate the amortization of your investment with certainty and without any surprises.

Zytech Group, created in 2005 is one of the largest European PV manufacturers and Top 3 in Spain.



One of the TOP European PV manufacturers since 2005



ON-GRID-CONNECTED INSTALLATIONS WORLDWIDE

Zytech has sold hundreds of MW in more than 22 countries worldwide, mostly in Europe and USA, making Zytech one of the most experienced manufacturers of PV solar modules. Zytech modules are ideal for grid-connected installations given their high robustness and reliability, as well as their excellent value for money, which allows you to get the most out of your investment in any project from day one:

- **Solarphotovoltaicfarms**
- **Photovoltaic installations on industrial, commercial, agricultural, livestock roofs, for desert environment...**
- **Domestic installations**
- **Building integrated installations**



CONCENTRATED PHOTOVOLTAICS (CPV)

Zytech Solar has from the outset aimed to offer the market the most cost-effective photovoltaic system using concentrated photovoltaic (CPV). These systems use highly reflective mirrors and advanced elements that are weather resistant and that ensure continuous high performance in outdoor environment despite inclemencies.

By increasing the output per module, Zytech's concentrating mirrors effectively drop module cost per watt by almost half. Concentrated photovoltaic have been clearly demonstrated as the most effective photovoltaic system. The system that Zytech manufactures is a **Low Concentrated Photovoltaic system (LCPV)**, consisting of a two-axis tracking system fitted with C-Si modules in a construction that uses the highly efficient solar cell in conjunction with mirrors fixed to both sides.

HIGH IRRADIATION TECHNOLOGY

Special encapsulation and lamination process with **Zytech Solar proprietary technology for high irradiation environment**. Modules manufactured using world leading concentrating photovoltaic technology, developed by Zytech Solar.

Zytech works with best research institute like NREL (National Renewable Energy Laboratory) and PARC (Palo Alto research Center). Zytech has unique manufacturing process with a special simulator of 4000 Wh/m² for test high irradiation and high temperature.

OFF-GRID AND HYBRID APPLICATIONS

In locations where there is no electrical grid, a correctly-sized off-grid photovoltaic installation with quality components is capable of supplying electricity for a host of applications: illumination, refrigeration, pumping, operation of household appliances, telecommunications systems, traffic signals, weather stations, sailing, caravanning... They consist of simple, low-maintenance systems.

These installations can be installed almost anywhere to permit things as important as a refrigerator for medicines in a rural hospital in Africa, illumination in a night school in a South American jungle, or a radio transmitter in high mountain areas. Zytech Solar off-grid systems are the perfect solution in almost any location, whether on boats, land vehicles, rural areas, the jungle, the desert or high mountain areas.

Zytech offers several types of system: conventional off-grid systems, hybrid systems - photovoltaic modules and mini wind turbines together - and special systems for solar pumping. In all cases, Zytech offers sizing services via calculation tools so that energy requirements are covered effectively without compromising efficiency. Zytech offers its customers all of the components required for an off-grid or hybrid system:

- **Photovoltaicmodules**
- **Chargecontrollers**
- **Batteries**
- **Inverters**
- **Solarpump**
- **Miniwindturbines**



Zytech polycrystalline PV module specifications

Wp (W)	Model	Dimensions LxWxH (mm)	Cells	Voc (V)	Isc (A)	Vmpp (V)	Imp (V)	Cell alignment	Cell dimensions (mm)	Module Efficiency
140	ZT140P	1482 x 680 x 35	36	21,96	8,41	17,6	7,95	4X9	156X156	14,07 %
145	ZT145P	1482 x 680 x 35	36	21,96	8,5	17,8	8,15	4X9	156X156	14,56 %
150	ZT150P	1482 x 680 x 35	36	21,87	9,28	18,23	8,22	4X9	156X156	15,06 %
260	ZT260P	1640 x 992 x 35/40	60	37,12	9,65	30,43	8,54	6X10	156X156	16,00 %
270	ZT270P	1640 x 992 x 35/40	60	37,94	9,489	30,94	8,73	6X10	156X156	16,60 %
275	ZT275P	1640 x 992 x 35/40	60	39,96	9,56	30,80	8,39	6X10	156X156	16,90 %
280	ZT280P	1640 x 992 x 35/40	60	37,08	9,71	30,80	8,39	6X10	156X156	17,21 %
320	ZT320P	1956 x 992 x 40/50	72	44,04	9,33	36,70	8,72	6X12	156X156	16,49 %
330	ZT330P	1956 x 992 x 40/50	72	44,28	9,58	36,90	8,95	6X12	156X156	17,01 %
340	ZT340P	1956 x 992 x 40/50	72	44,52	9,80	37,10	9,16	6X12	156X156	17,52 %

EFFICIENCY

High Module Conversion Efficiencies utilizing three or four bus bars per cell.

WARRANTY

Peace of Mind Guaranteed with a twenty-five Year Lineal Power Warranty and Product Quality Ensured for ten years.

CERTIFICATIONS

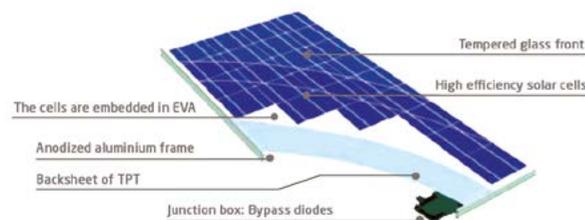
IEC 61215:2005, IEC 61730:2004, UL 1703-3rd Ed: 2014, ULC/ ORD C1703-01:2014, ISO 9001:2008, PSK 024:2008.

POSITIVE TOLERANCE

Strict quality control guarantees higher average power output according to tolerance 0% to +3% of maximum power.

OPTIMIZED STRENGTH

Minimum standard for wind 2700Pa to a Mechanical load capacity up to 5400Pa meet customer's needs for durability on high mountains, sea shores, & paths between buildings.

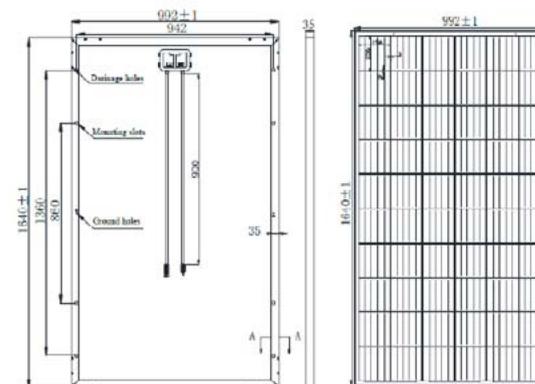


ZT SERIES POLYCRISTALLINE SOLAR MODULE 270P /280P

Cell Data	
Technology	Polycrystalline Silicon
Number Per Module	60
Dimension	156 x 156mm (6 inches)
Orientation	6x10

Thermal Data	
Nominal Operating Cell Temperature (NOCT)	45°C ± 2°C
Temperature Coefficient of Voc	-0.34%/°C
Temperature Coefficient of Isc	+0.049%/°C
Temperature Coefficient of Power Pmax	- 0.41 %/°C

System Integrated Parameters	
Maximum System Voltage SCII	1000 VDC (UL1000V)
Maximum Reverse Current	Do not apply external voltages larger than Voc to the module
Operating Temperature	40≈+85°C
Max Series Fuse Rating	15A

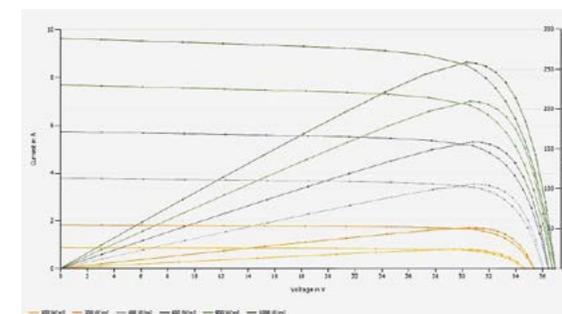


Electrical Data (STC)		ZT270P	ZT280P
Maximum power (W)	Pmax	270	280
Power Output Tolerance (%)		0% ~ +3%	0% ~ +3%
Maximum Power Voltage (V)	Vmpp	30.94	30.80
Maximum Power Current (A)	Imp	8.72	8.39
Open Circuit Voltage (V)	Voc	37.94	37.08
Short Circuit Current (A)	Isc	9.89	9.71
Module Efficiency (%)		16.6%	17.21%

* At Standard Conditions (STC) Irradiance 1000 watt/m², spectrum AM 1,5 at a cell temperature of 25°C

Physical Characteristics	
Module Dimension (LxWxH)	1640 x 992 x 40mm
Weight	18.5 kg
J-Box	IP65 or IP67 rated, 3/6 diodes
Connector	MC4 or MC4 Compatible
Glass	3.2mm (0.13 in), High Transmission, AR Coated Tempered Glass
Cable	4 mm ² PV cable, 900mm/1000mm
Frame	Silver/ Black Anodized Aluminum Alloy

* Zytech Solar reserves the right to change specifications without notice*



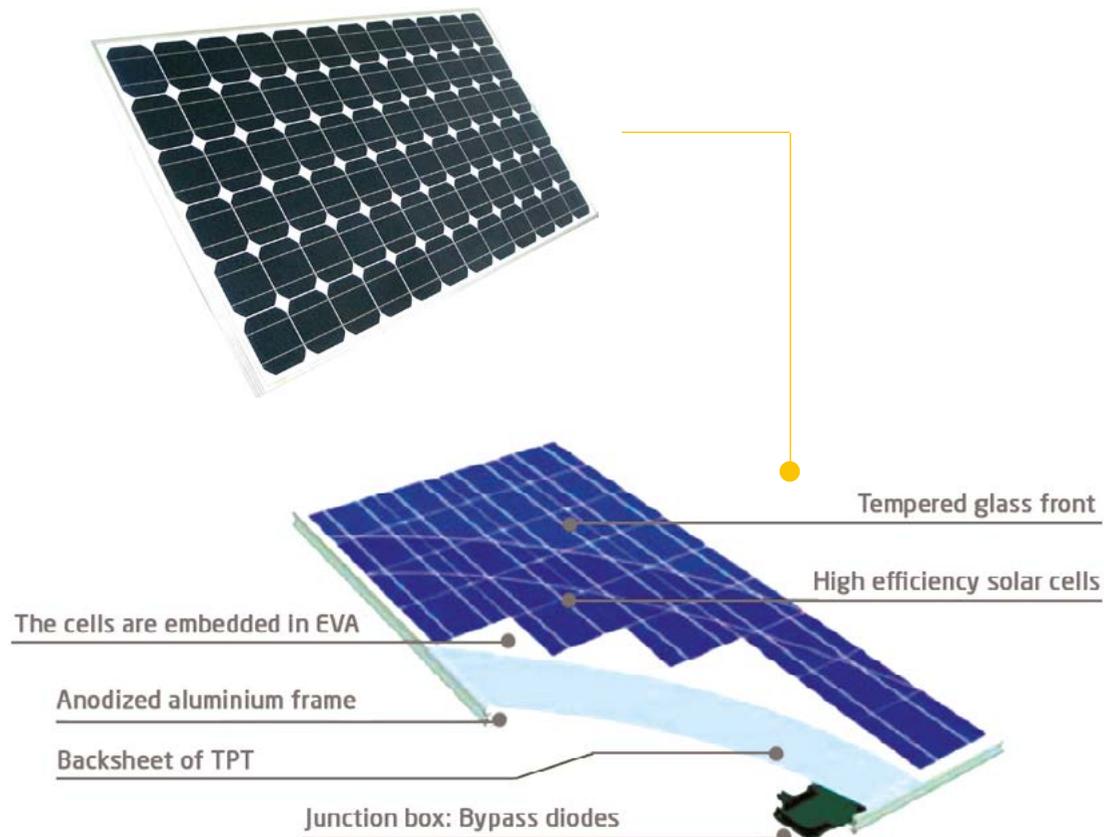
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Zytech monocrystalline module specifications

Wp (W)	Model	Dimensions LxWxH (mm)	Cells	Voc (V)	Isc (A)	Vmp (V)	Imp (A)	Weight (Kg)	Cell alignment	Cell Dimension (mm)	Module Efficiency
150	ZT150S	1482 x 680 x 35	36	22,33	9,10	18,61	8,06	12	4 x 9	156 x 156	14,88%
160	ZT160S	1482 x 680 x 35	36	22,67	9,57	18,89	8,47	12	4 x 9	156 x 156	15,87%
200	ZT200S	1580 x 808 x 35	72	45,25	5,92	37,77	5,29	15	6 x 12	125 x 125	15,66%
205	ZT205S	1580 x 808 x 35	72	45,36	6,12	37,80	5,42	15	6 x 12	125 x 125	16,05%
260	ZT260S	1640 x 992 x 35/40	60	38,32	8,90	31,26	8,32	18	6 x 10	156 x 156	15,98%
265	ZT265S	1640 x 992 x 35/40	60	38,46	9,13	31,37	8,45	18	6 x 10	156 x 156	16,28%
270	ZT270S	1640 x 992 x 35/40	60	38,56	9,27	31,48	8,58	18	6 x 10	156 x 156	16,59%
310	ZT310S	1956 x 992 x 50	72	46,46	8,70	37,52	8,27	23	6 x 12	156 x 156	15,97%
320	ZT320S	1956 x 992 x 50	72	46,62	8,94	37,60	8,51	23	6 x 12	156 x 156	16,49%
330	ZT330S	1956 x 992 x 50	72	43,80	9,68	36,50	9,04	23	6 x 12	156 x 156	17,00%
340	ZT340S	1956 x 992 x 50	72	44,04	9,92	36,70	9,27	23	6 x 12	156 x 156	17,52%
345	ZT345S	1956 x 992 x 50	72	47,00	9,65	38,89	9,07	23	6 x 12	156 x 156	17,88%
350	ZT350S	1956 x 992 x 50	72	44,28	10,15	36,90	9,49	23	6 x 12	156 x 156	18,04%
360	ZT360S	1956 x 992 x 50	72	47,00	9,77	38,45	9,38	23	6 x 12	156 x 156	18,55%



ZT SERIES MONOCRISTALLINE 345S SOLAR MODULE

Cell Data	
Technology	Monocrystalline Silicon
Number Per Module	72
Dimension	156X156
Orientation	6 x 12

Thermal Data	
Nominal Operating Cell Temperature (NOCT)	45°C ± 2°C
Temperature Coefficient of Voc	-0.34%/°C
Temperature Coefficient of Isc	0.037 %/°C
Temperature Coefficient of Power Pmax	-0.48 %/°C

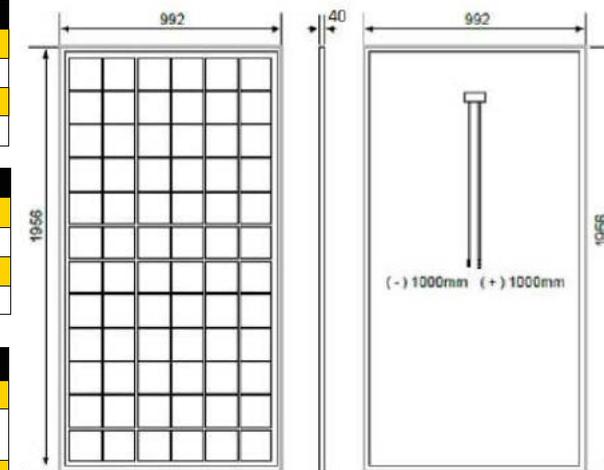
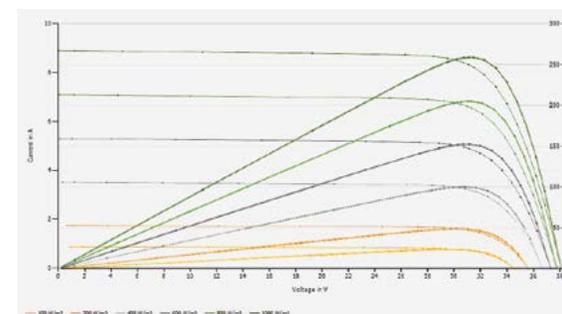
System Integrated Parameters	
Maximum System Voltage SCII	1000 VDC
Maximum Reverse Current	Do not apply external voltages larger than Voc to the module
Operating Temperature	40~+85°C
Max Series Fuse Rating	15A

Electrical Data (STC)		ZT345
Maximum power (W)	Pmax	345W
Power Output Tolerance (%)		0% ~ +3%
Maximum Power Voltage (V)	Vmpp	38,99
Maximum Power Current (A)	Impp	8.32
Open Circuit Voltage (V)	Voc	47
Short Circuit Current (A)	Isc	9,65
		17,88%

*Spectrum AM 1,5 at a cell temperature of 25°C

Physical Characteristics	
Module dimensions (L x W x H)	1956 x 992 x 40 mm
Weight	22 kg
J-Box	IP65 or IP67 rated, 3 / 6 diodes
Connector	MC4 or MC4 Compatible
Glass	3.2mm (0.13 in), High Transmission, AR Coated Tempered Glass
Cable	4 mm PV cable, 900mm/1000mm
Frame	Black Anodized Aluminum Alloy

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EUROPEAN MANUFACTURER OF PHOTOVOLTAICS MODULES



1 Own Production Plants: Spain, India, México
PRODUCTION CAPACITY 400 MW.



2 Headquarters in SPAIN and operating subsidiaries in many different countries.



3 MANUFACTURING SINCE 2005, one of the largest European PV manufacturers.



4 Stock in Europe



5 Zytech Solar is part of ZYTECH GROUP, a Spanish holding company with experience in the renewable energy sector. Other group companies are engaged in the manufacture of:

- LED Lamps (Zytech LEDS Co)
- Electrical vehicles and Drones (ZYTEL Automoción SL)
- Solar Thermal collectors (Zytech Engineering Technology)
- Wind turbines (Zytech Aerodyne Co).

SOLAR WATER PUMPING

Solar powered water well pumps are the reliable way to pump water. Zytech Solar offer a pumping system solutions that can be applied to daily use (underground water), agriculture irrigation, forestry irrigation, desert control, pasture animal husbandry, water supply for islands, wastewater treatment engineering, and so on.

Zytech works to promote the utilization of new energy resources, solar pumping systems are more and more used in municipal engineering, city center squares, parks, tourist sites, resorts and hotels, the landscapes and fountain systems in the residential areas.

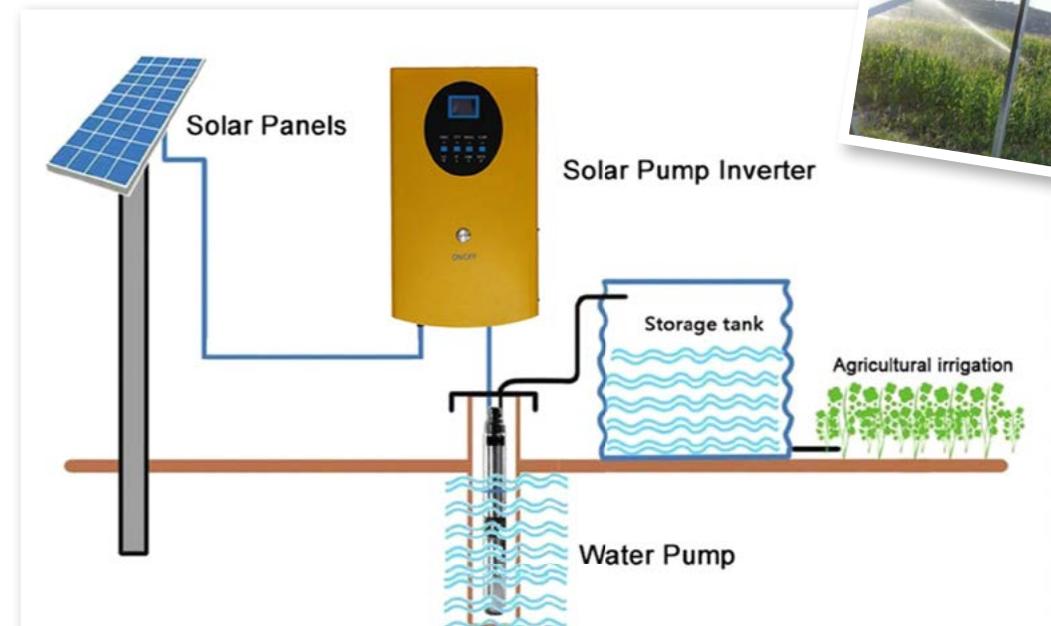
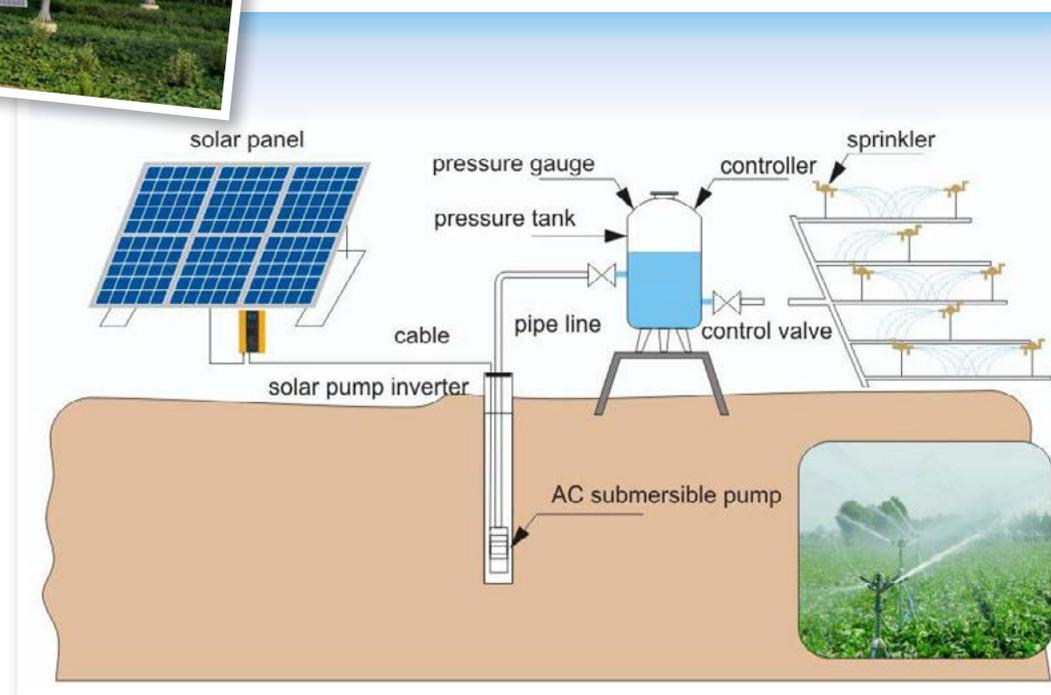
One important complement of solar panels pumping solution is an inverter with capability of frequency change, which allows the pumping system to work more hours, starting with low solar radiation at early morning and stay working till late evening, prolonging the active hours of the pumping system. We provide also such inverters, which improves our solution in this field.



SOLAR PUMP INVERTERS

Zytech Solar Pumping KIT includes:

- Solar Panels (ZYTECH)
- Inverter (ZYTECH, ZTI serie)
- Solar Pump
- Solar panel Structure for flat roof



Solar AC Pumping System

ZYTECH solar AC pumping system consist of solar cell, solar pump inverter and 3 phase AC pump.

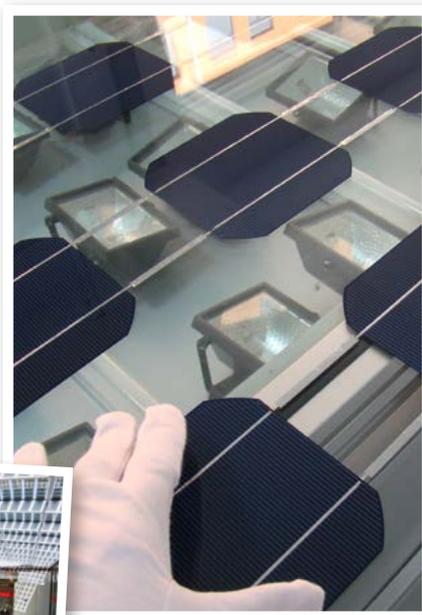


BUILDING INTEGRATED BIPV

The construction industry is increasingly seeking buildings with energy self-sufficiency and energy savings whilst maintaining aesthetic integration of the installations.

In addition to its standard modules, Zytech offers special glass-glass modules for building integration for a range of applications: facades, roofs, shades, skylights...

Zytech's special modules are normally manufactured to order based on the technical and aesthetic requirements of each project and will improve any project's thermal and acoustic insulation.



SOLAR LED STREETLIGHTS

ZYTECH LED belongs to **Zytech Group**, is LED lighting manufacturer of wide range of products to indoor, industrial and outdoor lighting. Zytech manufactures competitive high-quality Led lighting systems.

Zytech Solar Street Light is the result of the experience and Know How in photovoltaic production combined with development of LED Lighting.

Zytech solar Powered Streetlight basically works by producing electricity which is conducted via cables and a solar battery charger to the solar batteries placed at the base of the pole. All high performance solar panels are made by efficient poly or mono solar cells. **The ZYTECH LED Street Light** has got one or two modules depending on the application. The solar regulator is designed according to the solar street light system.



Zytech Slac 4

European Leader of LED Lighting Manufacture

The company with corporate headquarters in Zaragoza and production plants in Spain and China has specialized its activity with revolutionary LED Technology. This activity carried out in the production facilities of ZYTECH SOLAR, which owns 100% of the group.

Own Technology.

Own production lines.

Designing our own machinery.

The most stringent quality certifications such as DLC, FIDE, ANCE, RoHs, CE, UL and Energy Star

Guidelines DLC and Energy Star

TOP 3 EUROPEAN MANUFACTURER WITH ENERGY STAR CERTIFICATION, THE MOST EXIGENT, WITH 6000 HOURS TESTS.

The best combination of Zytech Solar and Zytech Led technologies for the most efficient and robust Solar Street Lamp.





Making a better world

A WORLD OF RENEWABLE ENERGIES

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ZYT Energy Group S.L. is part of the Zytech Group.

ZYT Energy Group S.L. is part of the Zytech Group, a Spanish group of companies with an international presence whose activities take place on five continents. It specializes in the production of photovoltaic modules, building integrated photovoltaic (BIPV) systems and off-grid photovoltaic systems, whilst other group companies are devoted to the manufacture of mini wind turbines (Zytech Aerodyne) solar streetlamps, solar thermal energy equipment, electric vehicles and drones (Zytel).