



NEW-TEK[®] | SCHMID[®] Company
the high-tech manufacture of
the solar modules

GREEN
ALTERNATIVE
ENERGY



Review
Kyrgyzstan, November 2016



Agenda

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ABOUT US

NEW-TEK LLC - is a Kyrgyz-German company engaged in the manufacture and supply of solar modules, the development and implementation of innovative projects in the area of solar energy in the CIS, Europe and the Middle East.

Our goal - the introduction of alternative renewable sources of energy to change and improve people's lives and the world around them.

We want to preserve this world for future generations.

New-Tek was founded in 2015 year Kyrgyz and German companies and from 2016 year started production of solar modules

GENERAL INFORMATION

Year of founded:	2015 – company foundation 2016 – start of production
Area:	Renewable energy sources
Focus:	Solar Energy Solar Modules
Owner:	Kyrgyzstan: Babek LLC Germany: SCHMID Group
Head Office:	Bishkek, Kyrgyzstan
Manufacture:	FEZ «Bishkek», Ak Chii v., Chui Oblast Kyrgyzstan
Volume of production:	30 mWp per year / 120 thousand modules

Solar Energy:

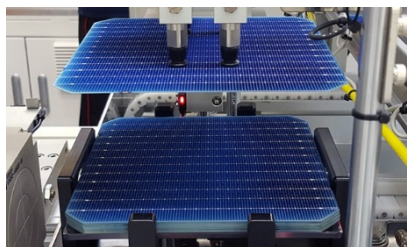
Eco-friendly, free and renewable source of energy on earth

BUSINESS FOCUS

Financial highlights:	Company Annual turnover of 20 mln. USD	
Geography of sales:	<ul style="list-style-type: none"> • Kyrgyzstan • CIS 	<ul style="list-style-type: none"> • Europe • Middle East
Our advantages:	<ul style="list-style-type: none"> • Production at the German automated line • For the production of modules using silicon cells of the highest quality Grade A • High levels of efficiency of solar modules • The high level of mechanical strength and a minimum level of degradation of the crystals 	
Product:	<ul style="list-style-type: none"> • Polycrystalline and monocrystalline solar modules of Class – Grade A • The effectiveness of efficiency of at least 16% • Max output power from 250 Wt to 270 Wt • Degree of protection IP65 • Operational efficiency: <ul style="list-style-type: none"> – 100% useful effect - 10 years – the loss of up to 10% - 15 years – the loss of up to 20% - 25 years 	

On the part of the Germany the partner was the company, who is leader in the production of technologies for solar energy - SCHMID Group

The history of «SCHMID Group» company has more than 150 years. This company is one of the leading in the world in the development of modern lines for the production of solar modules based on silicon. The company has specialized manufactories in Germany, Taiwan, Malaysia, China, and now in Kyrgyzstan.



In November 2016 the company «NEW-TEK» has launched production of solar modules in the FEZ "Bishkek" in the Kyrgyz Republic. The company is equipped the most modern automatic line for the assembly of solar modules from the German company - «SCHMID Group». Factory-installed equipment allows to produce solar modules of the latest generation classification of Grade A, with a high degree of efficiency and reliability.

The products are certified according to German and international standards and complies with all safety standards.



Our Product

Solar modules from TM NEWTEK^R, it is a product of class A produced in accordance with international standards and high efficiency

NEWTEK SM-250 | 60 M

This high-performance the solar module NEWTEK with power from 260 Wt. to 270 Wt. constructed on 60 monocrystalline solar cell the Grade A with a maximum efficiency no less 16%.

With a service life of at least 25 years, at a low cost, aesthetic design and easy installation, our solar modules are an excellent investment for large-scale solar station, as well as for holiday home, farm or villa.

NEWTEK Solar Modules made using German technology from SCHMID^R

EXCELLENT CELLS EFFICIENCY

We use only Grade-A Cells with efficiency no less 16% achieved through advanced cell manufacturing technology

15.9%

EXCELLENT WEAK LIGHT PERFORMANCE

Solar modules from NEWTEK have excellent weak light performance (morning, evening and cloudy days)



SAND AND SALT PROTECTION

Reliable quality leads to a better sustainability even in harsh environment like desert or coastline



PANEL THICKNESS

The latest technologies allow us to make thin and light solar modules. Easy installation and transportation

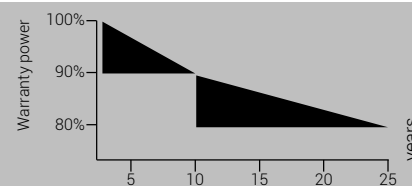


HIGH WIND AND SNOW RESISTANCE

NEWTEK solar modules withstand snow load of up to 550 kg/m² and wind speed of up to 162km/h



STANDARDS



For a period of twenty-five (25) years commencing on the Warranty Start Date, loss of power output of the nominal power output measured at Standard Test Conditions (ST C) for the Product(s) shall not exceed:

- For Polycrystalline Products: 2% in the first year, thereafter 0.67% per year ending with 82% in the 25th year after the Warranty Start Date
 - For Monocrystalline Products: 3% in the first year, thereafter 0.67% per year, ending with 81% in the 25th year after the Warranty Start Date
- The Warranty Start Date shall be defined as the date of the Bill of Lading date

Technical Characteristics

Solar Cell:	Mono-Crystalline 156x156mm 60pcs (6x10)
Class of Cell:	GRADE A
Dimension AxBxC:	1 665 x 1 001 x 42 mm
Weight:	18,5 kg ± 1
Front Glazing (think):	Tempered Glass, 3.2 mm
No. of Bypass Diodes:	3 pcs
Cable (Diameter and Length):	D=4 mm ² , L=1000/ 1200 mm
Type of Connector:	Compatible type MC4
Junction Box (protec. degree):	IP 65 Rated
Frame:	Anodized aluminum
Max Load:	5 400 Pa
Operating Temperature:	- 40 to +85 °C
Nominal Operating Cell t°C:	46 ± 2°C

Electrical characteristics (STC*)

Max Power (Pmax):	260-270 Wt
Voltage at Pmax (Vmpp):	31.1 V
Current at Pmax (Impp):	8.55 A
Open-Circuit Voltage (Voc):	38.3 V
Short-Circuit Current (Isc):	9.1 A
Max-System Voltage (VDC):	1 000 V
Module Efficiency:	15.9 %
Max Reverse Current (A):	16 A
Temp. Coefficient of Pmax:	-0.41 % / °C
Temp. Coefficient of Voc:	-0.30 % / °C
Temp. Coefficient of Isc:	0.05 % / °C

Under standard test conditions (STC): solar irradiance @ 1000 W/m², AM 1.5, cell temperature @ 25° C



Caution: read safety and installation instructions before using this product

NEWTEK SM-250 | 60 P

Optimal cost and adapted to the Nordic countries, the solar module with power from 250 Wt to 260 Wt., constructed on the 60 polycrystalline solar cell the Grade A with efficiency no less 15.3%

With its low unit cost and long service life this solar panel is an excellent solution for a farm or a country house. A personal solar power station using NEWTEK SM-250P | 60P panels will be a perfect solution especially for countries with moderate climate and cloudy weather.

NEWTEK Solar Modules made using German technology from SCHMID^R

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We use only Grade-A Cells with efficiency no less 15.3% achieved through advanced cell manufacturing technology

15.3%

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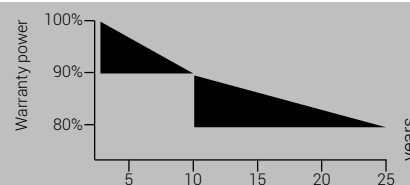


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Max Load:	5 400 Pa
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Max Power (Pmax):	250-260 Wt
Voltage at Pmax (Vmpp):	30.7 V
Current at Pmax (Impp):	8.3 A
Open-Circuit Voltage (Voc):	38.1 V
Short-Circuit Current (Isc):	8.8 A
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Module Efficiency:	15.3 %
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Where applicable and how it works

The NEWTEK[®] solar module can be used in any area, where today need the power supply

Solar technology can be applied in any field, which today uses traditional energy sources

SOLAR MODULES -

green and clean alternative for the traditional energy source

1

HOUSE / HOME



THE USE
MODEL

DESCRIP-
TION AND
EXAMPLE

- Solar Modules are used to generate electricity in residential premises, for example in vacation homes, where there is a problem with a traditional power supply
- Kit of the Solar station can be used as an alternative source of supply in regions with high cost of traditional energy

2

FACTORY / BUSINESS



- The solar station can be used as an alternative or mixed power supply to small productions to reduce operating costs
- Some companies are using the solar station as a power source in remote locations: Cellular operators to supply BS, Oil Companies for pumping stations, Geologists for mobile stations

3

INFRASTRUCTURE



- The solar station in the city's infrastructure are used as the power source of the city facilities: indoor parking, street lights, pedestrian traffic lights, etc.
- Advertising companies use solar stations for lighting and outdoor illuminated signs

To obtain energy from the sun requires the installation of the solar station composed: of module, inverter, controller and batteries



An example of a set of solar stations for private home with a consumption of 5 kWt

1 New-Tek products:

- Solar Modules **20 pcs**
(estimation 1 kWt = 4 modules on 250 Wt)

2 Components from other company:

- Fixings for installation on the roof - **1 set**
- Battery capacity of 100 Ah - **4-6 pcs**
- Inverter - **1 pcs**
- Controller - **1 pcs**

NOTE:

*For work the solar station is enough solar modules, inverter and controller.
The battery is required for the accumulation of solar energy during the day and return the energy in the night, when solar modules do not produce energy.*



**THANK YOU FOR YOUR ATTENTION
TOGETHER WE MAKE THE WORLD A BETTER**

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