



# Product Catalogue

WORLDWIDE

# The **best \$/kWh** value under the sun



Trina Solar is a pioneering manufacturer of **high quality photovoltaic modules**.

## Vertically Integrated

**Founded in 1997**, Trina Solar is a pioneering manufacturer of high quality photovoltaic modules. **Listed on the New York Stock Exchange (NYSE)** since 2006, Trina Solar is currently one of the few PV manufacturers to develop a wholly vertically-integrated business model: from the production of ingots, wafers and cells to the assembly of modules. This integrated value chain allows us to continuously improve the production process, provide high quality products to our customers, and develop one of the best cost structures in the industry. At the end of 2010, the company will have **a nameplate module capacity of 950MW**.

## Regional Presence

Trina Solar's increasingly global presence includes offices in Germany, Spain, Italy, Switzerland, China, S. Korea, Japan and USA. In order to provide our customers with **immediate and reliable service**, the company has opened **regional headquarters** in Europe, North America and Asia-Pacific.

## Proven Quality

The company launched the "**Trina Solar Center For Excellence**" to ensure a high level of quality assurance and precision testing of its PV modules. The Center covers an area of 7,200 sqm, supports a comprehensive range of tests including **product certification processes**, material **reliability tests** for module products, highly accelerated stress tests and **material evaluation** and research. These tests can assess the effects of damp heat, thermal cycle, humidity freeze, thermal shock and UV exposure, to ensure the capability of Trina Solar's modules to withstand prolonged exposure in **extreme climate conditions**.



# TSM-DC01

## The Universal Solution



Easy installation and handling for various applications



Module can bears snow loads (5400PA) and wind loads (2400PA)



Guaranteed power output (0~+3%)



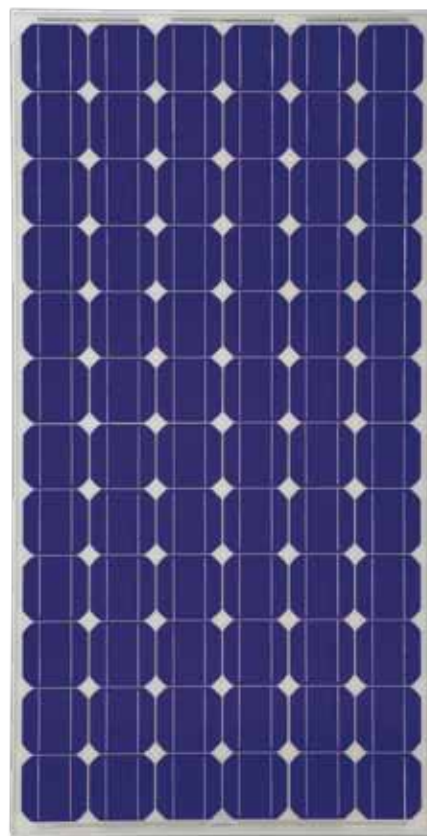
High performance under low light conditions (Cloudy days, mornings and evenings)



Independently certified by international certification body\*



Manufactured according to International Quality and Environment Management System (ISO9001, ISO14001)



Trina Solar's best selling panel since 2004. One of the world's most reliable panels, tested and proven by internationally renowned institutions such as the TUV Rheinland and the Desert Knowledge Australia Center. Satisfying our customers all around the globe, the TSM-DC01 works in any type of installation, from off-grid systems in Tibet to large commercial rooftops in New Jersey and ground-mounted projects in the Australian desert.

Trina Solar, **the best \$/kWh** value under the sun



### Trina Solar Limited

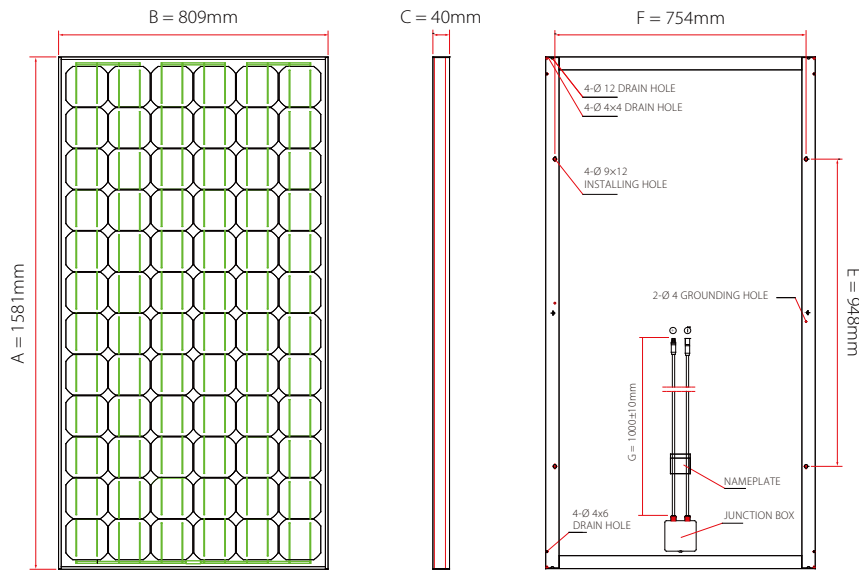
No. 2 Trina Road, Trina PV Industrial Park, New District, Changzhou, Jiangsu, 213031, China

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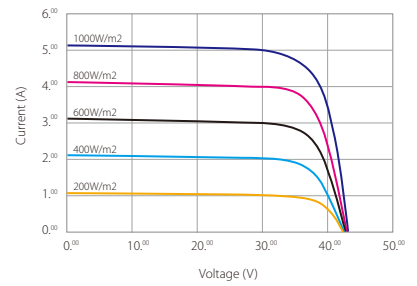
Founded in 1997, Trina Solar is a vertically integrated PV manufacturer, producing everything from ingots to modules, using both mono and multicrystalline technologies. At the end of 2010, the company will have a nameplate module capacity of 950MW. Trina Solar's wide range of products are used in residential, commercial, industrial and public utility applications throughout the world.

Only by matching an efficient cost-structure with proven performance will we, as an industry, achieve grid parity. And at Trina Solar, we have both.

Dimensions of PV module TSM-DC01



I-V Curves of PV module TSM-180DC01



Efficiency	up to 14.5
Wattage	up to 185
Years warranty	25

Certification



Electrical Data @ STC	TSM-175DC01	TSM-180DC01	TSM-185DC01
Peak Power Watts- $P_{MAX}$ (WP)	175	180	185
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	36.2	36.8	37.5
Maximum Power Current- $I_{MPP}$ (A)	4.85	4.90	4.95
Open Circuit Voltage- $V_{OC}$ (V)	43.9	44.2	44.5
Short Circuit Current- $I_{SC}$ (A)	5.30	5.35	5.40
Encapsulated Cell Efficiency $\eta_c$ (%)	16.4	16.8	17.3
Module Efficiency $\eta_m$ (%)	13.7	14.1	14.5

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

General Data		Temperature Ratings	
Cell Type	125 x 125mm Monocrystalline silicon, 72pcs (6x12)	Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Glass	High Transmission, Low Iron, Tempered Glass 3.2mm	Temperature Coefficient of $P_{MPP}$	- 0.45%/°C
Frame	Anodized Aluminum	Temperature Coefficient of $V_{OC}$	- 0.35%/°C
J-Box / Connector	1. Tyco / Tyco or MC4, IP65 2. Renhe / 05-1 or MC4, IP65	Temperature Coefficient of $I_{SC}$	0.05%/°C

Mechanical and Packing Configuration		Maximum Ratings		Warranty
Dimensions (A x B X C)	1581 x 809 x 40mm	Operating Temperature	-40 ~ +85°C	5 years manufacturing warranty 10 years warranty, 90% power output 25 years warranty, 80% power output
Installation Hole Dimensions (E x F)	948 x 754mm	Storage Temperature	-40 ~ +85°C	
Cable length (G)	1000mm	Maximum System Voltage	1000VDC	
Weight	15.6kg	Maximum Series Fuse	10A	
Packing Configuration	23pcs/carton			
Quantity/Pallet	1 carton/pallet			
Loading Capacity	644pcs/40ft, 276pcs/20ft			



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# TSM-DC05

## The Performance Panel



Easy installation and handling for various applications



Module can bears snow loads (5400PA) and wind loads (2400PA)



Guaranteed power output (0~+3%)



High performance under low light conditions (Cloudy days, mornings and evenings)



Independently certified by international certification body\*



Manufactured according to International Quality and Environment Management System (ISO9001, ISO14001)



A high-efficiency module, with maximum power outputs ranging from 225 to 245Wp. Made with six-inch Monocrystalline cells, with module efficiencies up to 15.0%, this module is ideal for residential and rooftops installations.

Trina Solar, **the best \$/kWh** value under the sun



### Trina Solar Limited

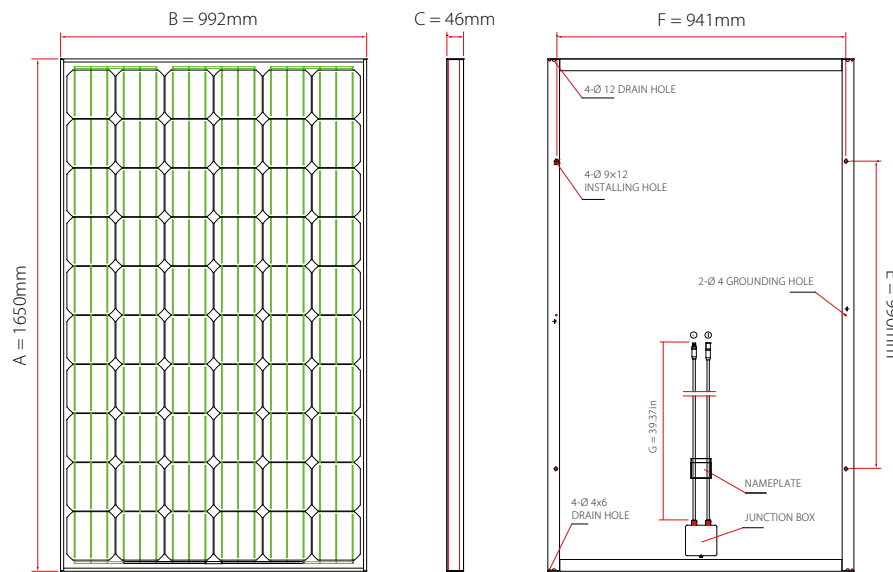
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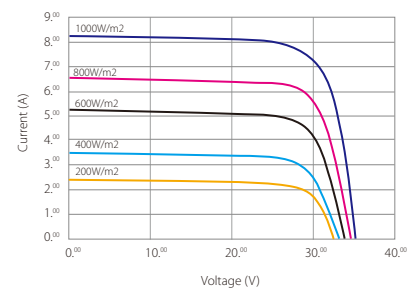
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## Dimensions of PV module TSM-DC05



## I-V Curves of PV module TSM-230DC05



Efficiency	up to 15.0
Wattage	up to 245
Years warranty	25

## Certification



Electrical Data @ STC	TSM-225DC05	TSM-230DC05	TSM-235DC05	TSM-240DC05	TSM-245DC05
Peak Power Watts- $P_{MAX}$ (WP)	225	230	235	240	245
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	29.4	29.8	30.1	30.4	30.7
Maximum Power Current- $I_{MPP}$ (A)	7.66	7.72	7.81	7.89	7.98
Open Circuit Voltage- $V_{OC}$ (V)	36.9	37.0	37.1	37.2	37.3
Short Circuit Current- $I_{SC}$ (A)	8.20	8.26	8.31	8.37	8.47
Encapsulated Cell Efficiency $\eta_c$ (%)	15.9	16.2	16.6	16.9	17.3
Module Efficiency $\eta_m$ (%)	13.7	14.1	14.4	14.7	15.0

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

## General Data

Cell Type	156 x 156mm Monocrystalline silicon, 60pcs (6x10)
Glass	High Transmission, Low Iron, Tempered Glass 3.2mm
Frame	Anodized Aluminum
J-Box / Connector	1. Tyco / Tyco or MC4, IP65 2. Renhe / 05-6 or MC4, IP65

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Temperature Coefficient of $P_{MPP}$	-0.45%/°C
Temperature Coefficient of $V_{OC}$	-0.35%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

## Mechanical and Packing Configuration

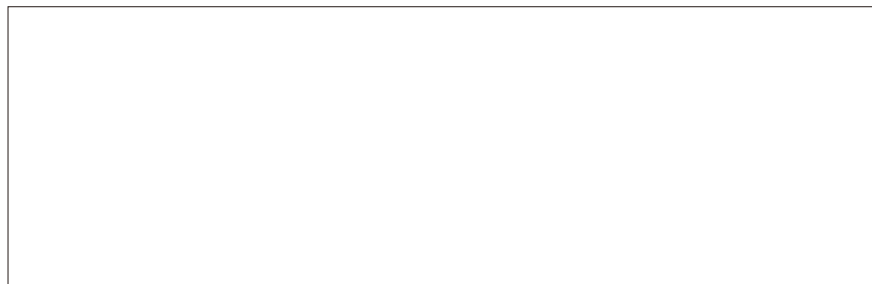
Dimensions (A x B x C)	1650 x 992 x 46mm
Installation Hole Dimensions (E x F)	990 x 941mm
Cable length (G)	1000mm
Weight	19.5kg
Packing Configuration	20pcs/carton
Quantity/Pallet	1 carton/pallet
Loading Capacity	520pcs/40ft, 120pcs/20ft

## Maximum Ratings

Operating Temperature	-40 ~ +85°C
Storage Temperature	-40 ~ +85°C
Maximum System Voltage	1000VDC
Maximum Series Fuse	15A

## Warranty

5 years manufacturing warranty
10 years warranty, 90% power output
25 years warranty, 80% power output



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# TSM-PC05

## The Universal Solution



Easy installation and handling for various applications



Module can bears snow loads (5400PA) and wind loads (2400PA)



Guaranteed power output (0~+3%)



High performance under low light conditions (Cloudy days, mornings and evenings)



Independently certified by international certification body\*



Manufactured according to International Quality and Environment Management System (ISO9001, ISO14001)



Currently the most popular panel produced by Trina Solar. Versatile and adaptable, with power output ranging from 220 to 240Wp, the TSM-PC05 panel is perfect for large-scale installations, particularly ground-mounted and commercial rooftop systems. Using reliable and carefully selected components that are tested at the Trina Solar Center of Excellence, this panel comes with a 25-year performance guarantee of 80% power production.

Trina Solar, **the best \$/kWh** value under the sun



### Trina Solar Limited

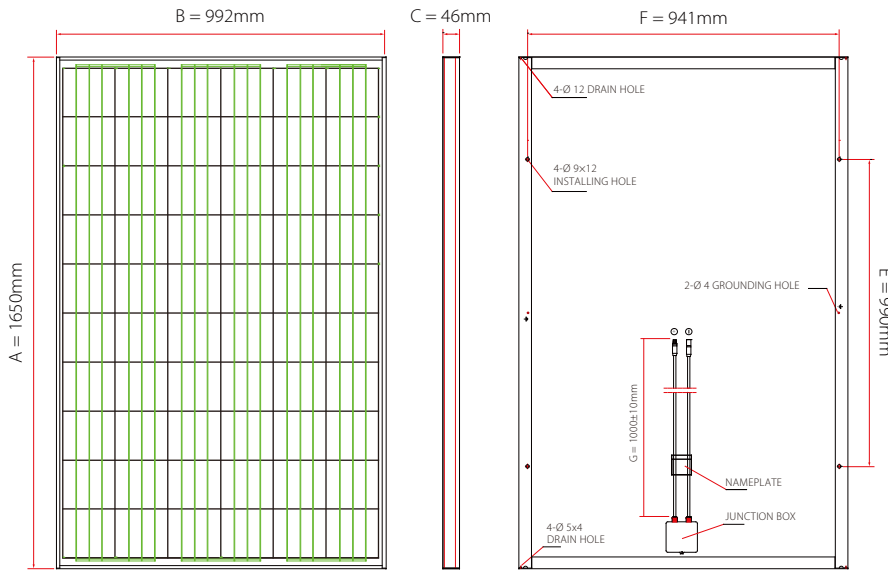
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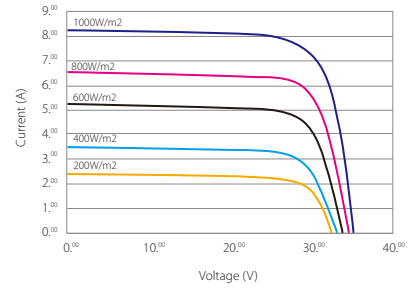
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## Dimensions of PV module TSM-PC05



## I-V Curves of PV module TSM-230PC05



Efficiency	up to 14.7
Wattage	up to 240
Years warranty	25

## Certification



Electrical Data @ STC	TSM-220PC05	TSM-225PC05	TSM-230PC05	TSM-235PC05	TSM-240PC05
Peak Power Watts- $P_{MAX}$ (WP)	220	225	230	235	240
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	29.0	29.4	29.8	30.1	30.4
Maximum Power Current- $I_{MPP}$ (A)	7.60	7.66	7.72	7.81	7.89
Open Circuit Voltage- $V_{OC}$ (V)	36.8	36.9	37.0	37.1	37.2
Short Circuit Current- $I_{SC}$ (A)	8.15	8.2	8.2	8.31	8.37
Encapsulated Cell Efficiency $\eta_c$ (%)	15.1	15.4	15.8	16.1	16.4
Module Efficiency $\eta_m$ (%)	13.4	13.7	14.1	14.4	14.7

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

## General Data

Cell Type	156 x 156mm Multicrystalline silicon, 60pcs (6x10)
Glass	High Transmission, Low Iron, Tempered Glass 3.2mm
Frame	Anodized Aluminum
J-Box / Connector	1. Tyco / Tyco or MC4, IP65 2. Renhe / 05-6 or MC4, IP65

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Temperature Coefficient of $P_{MPP}$	-0.45%/°C
Temperature Coefficient of $V_{OC}$	-0.35%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

## Mechanical and Packing Configuration

Dimensions (A x B X C)	1650 x 992 x 46mm
Installation Hole Dimensions (E x F)	990 x 941mm
Cable length (G)	1000mm
Weight	19.5kg
Packing Configuration	20pcs/carton
Quantity/Pallet	1 carton/pallet
Loading Capacity	520pcs/40ft, 120pcs/20ft

## Maximum Ratings

Operating Temperature	-40 ~ +85°C
Storage Temperature	-40 ~ +85°C
Maximum System Voltage	1000VDC
Maximum Series Fuse	15A

## Warranty

5 years manufacturing warranty
10 years warranty, 90% power output
25 years warranty, 80% power output



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# TSM-PC14

## Utility Scale Solar Module



Enhanced module durability with 4.0mm thick tempered glass



Module can bears snow loads (5400PA) and wind loads (2400PA)



More power (up to 285W)



Guaranteed power output (0~+3%)



High performance under low light conditions (Cloudy days, mornings and evenings)



Independently certified by international certification body\*



Manufactured according to International Quality and Environment Management System (ISO9001, ISO14001)



The NEW TSM-PC14 is the newest addition to Trina Solar's premium portfolio of Multicrystalline modules. With power outputs ranging from 265 to 285 Watt, the modules are designed specially for utility-scale installations. Along with the rest of Trina Solar's module portfolios, the PC14 provides the highest Quality and power output to our utility-scale customers.

Trina Solar, **the best \$/kWh** value under the sun



### Trina Solar Limited

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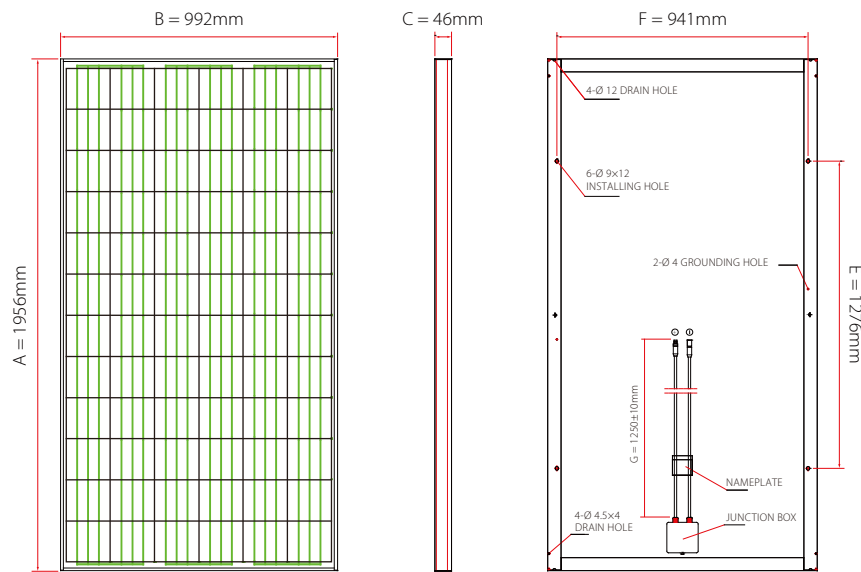
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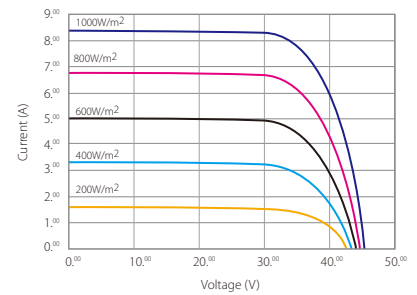
Only by matching an efficient cost-structure with proven performance will we, as an industry, achieve grid parity. And at Trina Solar, we have both.

# TSM-PC14 Utility Scale Solar Module

## Dimensions of PV module TSM-PC14



## I-V Curves of PV module TSM-280PC14



Efficiency	up to 14.7
Wattage	up to 285
Years warranty	25

## Certification



Electrical Data @ STC	TSM-265PC14	TSM-270PC14	TSM-275PC14	TSM-280PC14	TSM-285PC14
Peak Power Watts- $P_{MAX}$ (WP)	265	270	275	280	285
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	35.3	35.5	35.9	36.0	36.3
Maximum Power Current- $I_{MPP}$ (A)	7.50	7.60	7.7	7.8	7.86
Open Circuit Voltage- $V_{OC}$ (V)	44.2	44.3	44.4	44.4	44.5
Short Circuit Current- $I_{SC}$ (A)	8.20	8.29	8.39	8.45	8.49
Encapsulated Cell Efficiency $\eta_c$ (%)	15.1	15.4	15.7	16.0	16.3
Module Efficiency $\eta_m$ (%)	13.7	13.9	14.2	14.4	14.7

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

## General Data

Cell Type	156 x 156mm Multicrystalline silicon, 72pcs (6x12)
Glass	High Transmission, Low Iron, Tempered Glass 4mm
Frame	Anodized Aluminum
J-Box / Connector	Renhe / 05-6 or MC4, IP65

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Temperature Coefficient of $P_{MPP}$	-0.45%/°C
Temperature Coefficient of $V_{OC}$	-0.35%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

## Mechanical and Packing Configuration

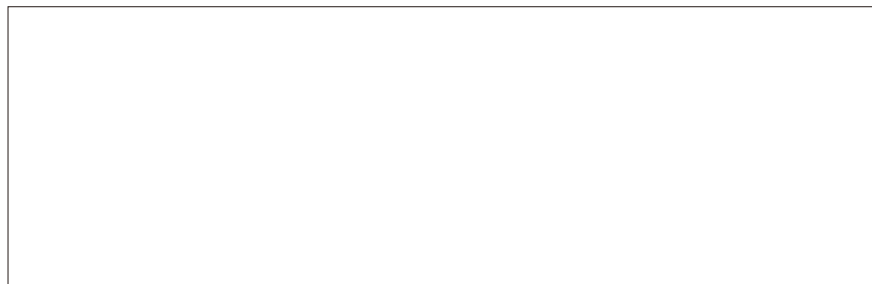
Dimensions (A x B X C)	1956 x 992 x 46mm
Installation Hole Dimensions (E x F)	1276 x 941mm
Cable length (G)	1250mm
Weight	28kg
Packing Configuration	20pcs/carton
Quantity/Pallet	1 carton/pallet
Loading Capacity	440pcs/40ft, 100pcs/20ft

## Maximum Ratings

Operating Temperature	-40~+85°C
Storage Temperature	-40~+85°C
Maximum System Voltage	1000VDC
Number of Bypass Diodes	3pcs
Maximum Series Fuse	15A

## Warranty

5 years manufacturing warranty
10 years warranty, 90% power output
25 years warranty, 80% power output



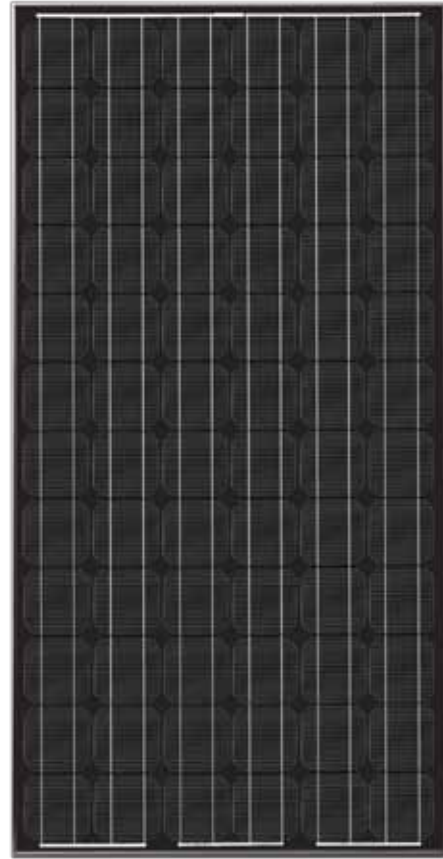
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# TSM-DC01 Black

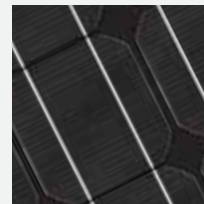
## The Aesthetic Solution

-  Easy installation and handling for various applications
-  Module can bears snow loads (5400PA) and wind loads (2400PA)
-  Aesthetic appearance through black design
-  Guaranteed power output (0~+3%)
-  High performance under low light conditions (Cloudy days, mornings and evenings)
-  Independently certified by international certification body\*
-  Manufactured according to International Quality and Environment Management System (ISO9001, ISO14001)



Seeking to provide our customers with sleek design and aesthetic solutions, Trina Solar developed the NEW DC01 Black Monocrystalline module. The DC01 Black combines Trina Solar's High-Efficiency Mono cells with a black frame and backsheet. The outcome is the perfect solution for chic residential and commercial applications.

Trina Solar, **the best \$/kWh** value under the sun



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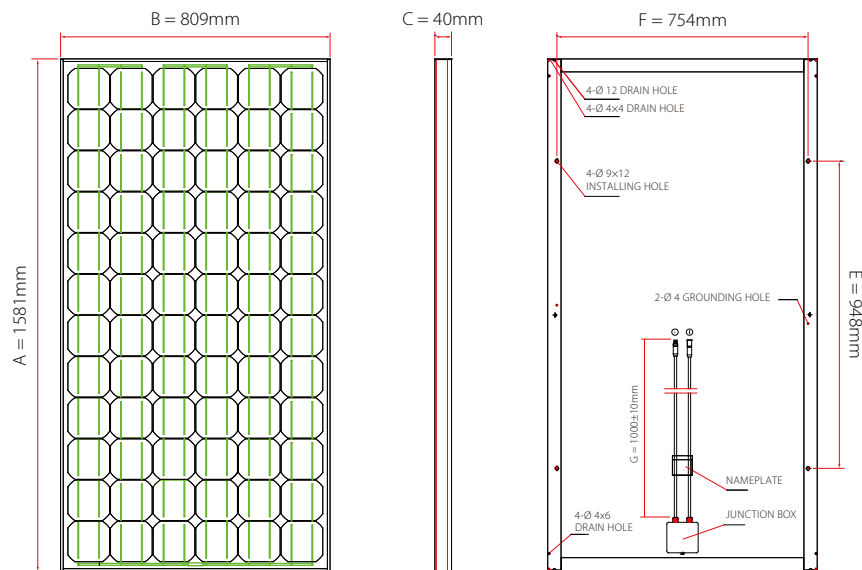
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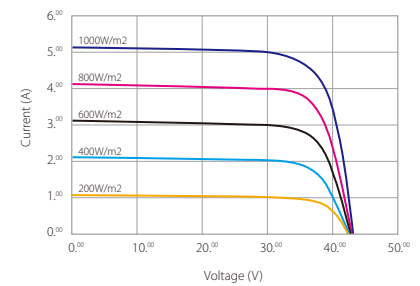
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# TSM-DC01 Black The Aesthetic Solution

## Dimensions of PV module TSM-DC01 Black



## I-V Curves of PV module TSM-180DC01 Black



Efficiency	up to 14.5
Wattage	up to 185
Years warranty	25

### Certification



Electrical Data @ STC	TSM-170DC01 Black	TSM-175DC01 Black	TSM-180DC01 Black	TSM-185DC01 Black
Peak Power Watts- $P_{MAX}$ (WP)	170	175	180	185
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	35.8	36.2	36.8	37.5
Maximum Power Current- $I_{MPP}$ (A)	4.76	4.85	4.90	4.95
Open Circuit Voltage- $V_{OC}$ (V)	43.6	43.9	44.2	44.5
Short Circuit Current- $I_{SC}$ (A)	5.25	5.30	5.35	5.40
Encapsulated Cell Efficiency $\eta_c$ (%)	15.9	16.4	16.8	17.3
Module Efficiency $\eta_m$ (%)	13.3	13.7	14.1	14.5

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

### General Data

Cell Type	125 x 125mm Monocrystalline silicon, 72pcs (6x12)
Glass	High Transmission, Low Iron, Tempered Glass 3.2mm
Frame	Anodized Aluminum
J-Box / Connector	1. Tyco / Tyco or MC4, IP65 2. Renhe / 05-1 or MC4, IP65

### Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Temperature Coefficient of $P_{MPP}$	-0.45%/°C
Temperature Coefficient of $V_{OC}$	-0.35%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

### Mechanical and Packing Configuration

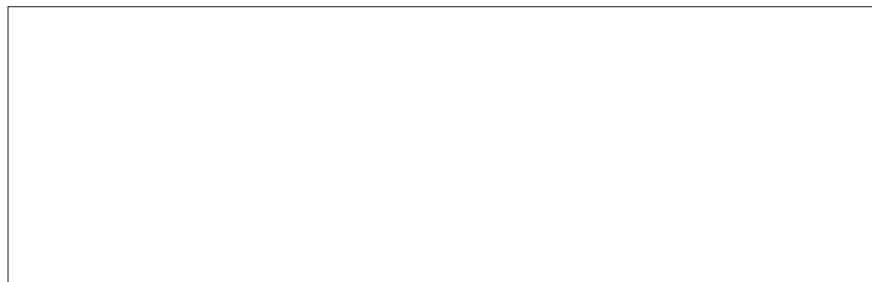
Dimensions (A x B X C)	1581 x 809 x 40mm
Installation Hole Dimensions (E x F)	948 x 754mm
Cable length (G)	1000mm
Weight	15.6kg
Packing Configuration	23pcs/carton
Quantity/Pallet	1 carton/pallet
Loading Capacity	644pcs/40ft, 276pcs/20ft

### Maximum Ratings

Operating Temperature	-40 ~ +85°C
Storage Temperature	-40 ~ +85°C
Maximum System Voltage	1000VDC
Maximum Series Fuse	10A

### Warranty

5 years manufacturing warranty
10 years warranty, 90% power output
25 years warranty, 80% power output



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# TSM-PC05 Black

## The Aesthetic Solution



Easy installation and handling for various applications



Module can bears snow loads (5400PA) and wind loads (2400PA)



Aesthetic appearance through black design



Guaranteed power output (0~+3%)



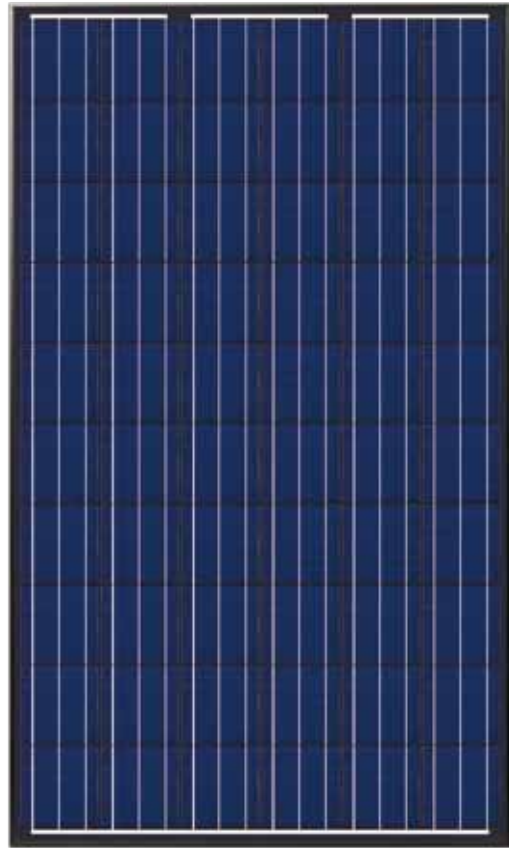
High performance under low light conditions (Cloudy days, mornings and evenings)



Independently certified by international certification body\*

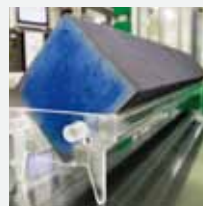


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### Trina Solar Limited

No. 2 Trina Road, Trina PV Industrial Park, New District, Changzhou, Jiangsu, 213031, China

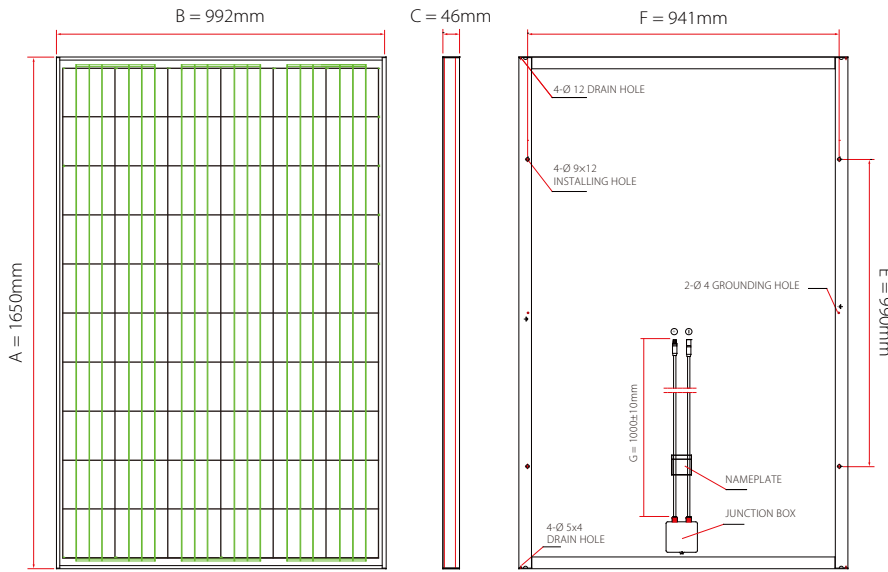
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Founded in 1997, Trina Solar is a vertically integrated PV manufacturer, producing everything from ingots to modules, using both mono and multicrystalline technologies. At the end of 2010, the company will have a nameplate module capacity of 950MW. Trina Solar's wide range of products are used in residential, commercial, industrial and public utility applications throughout the world.

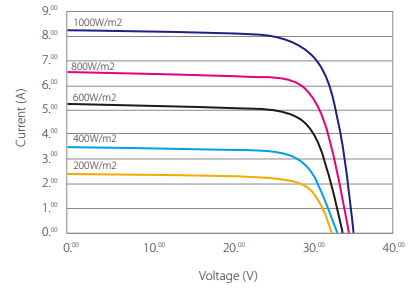
Only by matching an efficient cost-structure with proven performance will we, as an industry, achieve grid parity. And at Trina Solar, we have both.

# TSM-PC05 Black The Aesthetic Solution

## Dimensions of PV module TSM-PC05 Black



## I-V Curves of PV module TSM-230PC05 Black



Efficiency	up to 14.4
Wattage	up to 235
Years warranty	25

## Certification



Electrical Data @ STC	TSM-215PC05 Black	TSM-220PC05 Black	TSM-225PC05 Black	TSM-230PC05 Black	TSM-235PC05 Black
Peak Power Watts- $P_{MAX}$ (WP)	215	220	225	230	235
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	28.5	29.0	29.4	29.8	30.1
Maximum Power Current- $I_{MPP}$ (A)	7.55	7.60	7.66	7.72	7.81
Open Circuit Voltage- $V_{OC}$ (V)	36.4	36.8	36.9	37.0	37.1
Short Circuit Current- $I_{SC}$ (A)	8.13	8.15	8.20	8.26	8.31
Encapsulated Cell Efficiency $\eta_c$ (%)	14.7	15.1	15.4	15.8	16.1
Module Efficiency $\eta_m$ (%)	13.1	13.4	13.7	14.1	14.4

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

## General Data

Cell Type	156 x 156mm Multicrystalline silicon, 60pcs (6x10)
Glass	High Transmission, Low Iron, Tempered Glass 3.2mm
Frame	Anodized Aluminum
J-Box / Connector	1. Tyco / Tyco or MC4, IP65 2. Renhe / 05-6 or MC4, IP65

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Temperature Coefficient of $P_{MPP}$	-0.45%/°C
Temperature Coefficient of $V_{OC}$	-0.35%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

## Mechanical and Packing Configuration

Dimensions (A x B X C)	1650 x 992 x 46mm
Installation Hole Dimensions (E x F)	990 x 941mm
Cable length (G)	1000mm
Weight	19.5kg
Packing Configuration	20pcs/carton
Quantity/Pallet	1 carton/pallet
Loading Capacity	520pcs/40ft, 120pcs/20ft

## Maximum Ratings

Operating Temperature	-40 ~ +85°C
Storage Temperature	-40 ~ +85°C
Maximum System Voltage	1000VDC
Maximum Series Fuse	15A

## Warranty

5 years manufacturing warranty
10 years warranty, 90% power output
25 years warranty, 80% power output



**CAUTION:** READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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