# THE Money pros Module TSM-DD05A.08 (II)

60 CELL

MONOCRYSTALLINE MODULE

275-295W

**POWER OUTPUT RANGE** 

18.0%
MAXIMUM EFFICIENCY

0/+5W
POSITIVE POWER TOLERANCE

### TRINA SOLAR: A STRONG AND RELIABLE PARTNER

As a leading global manufacturer of next generation photovoltaic products, Trina Solar is committed to building mutually beneficial alliances with installers, developers, distributors and technological partners as the backbone of our shared goal to drive Smart Energy Together. Thanks to an extensive sales and service network with local expert teams throughout Europe, Trina Solar is perfectly positioned to support your needs. With Trina Solar as your strong, bankable partner you can rest assured knowing that you've made the right choice.

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## Excellent low light performance on cloudy days, mornings and evenings

- Back surface field
- Advanced Honey surface texturing
- Selective emitter



#### Maximize limited space with top-end efficiency

- Up to 180 W/m² power density
- Low thermal coefficients for greater energy production at high operating temperatures



#### Good aesthetics for residential applications

- Dark mono cells
- Black frame



#### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- All modules have to pass electroluminescence (EL) inspection
- PID resistant
- 1000 V UL/1000 V IEC certified



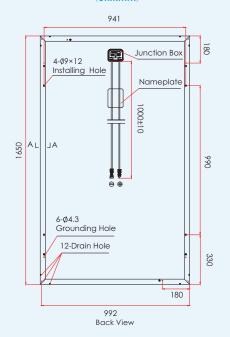
## Certified to withstand challenging environmental conditions

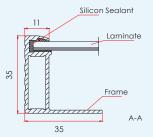
- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h
- Ammonia resistance
- Salt mist resistance
- resistance to sand and dust abrasion



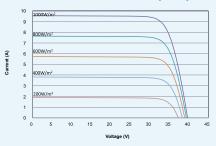


#### **DIMENSIONS OF PV MODULE TSM-DD05A.08 (II)** (unit:mm)

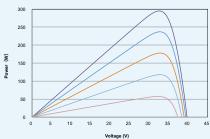




#### I-V CURVES OF PV MODULE (295W)



#### P-V CURVES OF PV MODULE (295W)















#### **CERTIFICATION**

IEC61215/EN61215 IEC61730/EN61730 IEC 627162 PfG 1917/05.11 IEC 61701 DIN EN 60068-2-68 LC2

ELECTRICAL DATA @ STC	TSM-275 DD05A.08 (II)	TSM-280 DD05A.08 (II)	TSM-285 DD05A.08 (II)	TSM-290 DD05A.08 (II)	TSM-295 DD05A.08 (II)
Peak Power Watts-P <sub>MAX</sub> (Wp)*	275	280	285	290	295
Power Output Tolerance-P <sub>MAX</sub> (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Maximum Power Voltage-V <sub>MPP</sub> (V)	31.4	31.7	31.8	32.2	32.5
Maximum Power Current-IMPP (A)	8.76	8.84	8.97	9.01	9.08
Open Circuit Voltage-Voc (V)	38.7	39.0	39.3	39.5	39.7
Short Circuit Current-Isc (A)	9.26	9.35	9.45	9.50	9.55
Module Efficiency η <sub>m</sub> (%)	16.8	17.1	17.4	17.7	18.0

STC: Irradiance 1000 W/m², Cell Temperature 25 °C, Air Mass AM1.5 \* Measuring tolerance:  $\pm 3\%$ 

ELECTRICAL DATA (NOCT)	TSM-275 DD05A.08 (II)	TSM-280 DD05A.08 (II)	TSM-285 DD05A.08 (II)	TSM-290 DD05A.08 (II)	TSM-295 DD05A.08 (II)
Maximum Power-P <sub>MAX</sub> (Wp)	205	209	212	216	220
Maximum Power Voltage-V <sub>MPP</sub> (V)	29.2	29.4	29.6	29.9	30.2
Maximum Power Current-IMPP (A)	7.02	7.10	7.17	7.23	7.28
Open Circuit Voltage-Voc (V)	36.0	36.3	36.6	36.7	36.9
Short Circuit Current-Isc (A)	7.48	7.55	7.63	7.67	7.71

NOCT: Irradiance at 800 W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s.

#### MECHANICAL DATA

Solar cells	Monocrystalline 156 × 156 mm (6 inches)
Cell orientation	60 cells (6 × 10)
Module dimensions	1650 × 992 × 35 mm (65.0 x 39.1 x 1.38 inches)
Weight	18.6 kg
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Backsheet	White
Frame	Black anodized aluminium alloy
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²), 1000 mm (39.4 inches)
Connector	MC4 Compatible

#### **TEMPERATURE RATINGS**

Nominal Operating Cell Temperature (NOCT)	44K(± 2K)	
Temperature Coefficient of PMAX	- 0.39%/K	
Temperature Coefficient of Voc	- 0.29%/K	
Temperature Coefficient of Isc	0.05%/K	

WARRANTY	

10 year Product Workmanship Warranty 25 year Linear Power Warranty

(Please refer to product warranty for details)

#### PACKAGING CONFIGURATION

Modules per box: Modules per 40' container: 840 pieces

MAX	MUM	RATII	NGS

Operational Temperature	-40 to +85°C		
Maximum System Voltage	1000V DC (IEC) 1000V DC (UL)		
Max Series Fuse Rating	15 A		
Mechanical load	5400 Pa		
Wind load	2400 Pa		



