

**For a Free Quote:**

**Web: [EnergyPal.com/solar](http://EnergyPal.com/solar)**

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# **EnergyPal**

## **Solar Panel Guide Specification Data Sheet**

**TPL Energy Co., Limited  
Full black panel TPL M-60 Series 270W-290W  
TPL9270M-60**

Also available on the web at  
[EnergyPal.com/tpl-energy-co-limited-solar-panels/tpl9270m-60](http://EnergyPal.com/tpl-energy-co-limited-solar-panels/tpl9270m-60)



# TPL SOLAR MODULE

## TPL M-60 Series 270W-290W



### EU Brand & Warranty



### High Efficiency

High module conversion efficiency (up to 18.35%), through innovative manufacturing technology.



### Low-Light Performance

Advanced glass and solar cell surface texturing allow for excellent performance in low-light environments



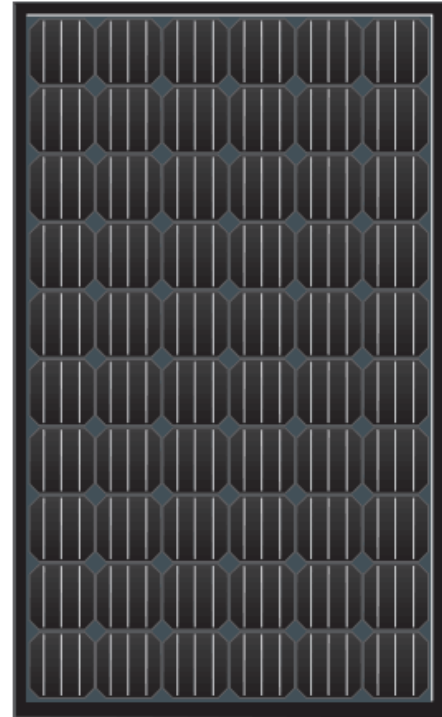
### Severe Weather Resilience

Certified to withstand : wind Load (2400 Pascal) And Snow Load (5400 Pascal)



### 5 Busbar Solar Cell

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance.



### Superior Quality Control

Full automatic production line  
ISO9001:2008 quality management system  
100% three times EL and appearance inspection



### Plus tolerance

0-+5W positive power tolerance guarantees the highest system efficiency and yield stability



### Performance Guarantee

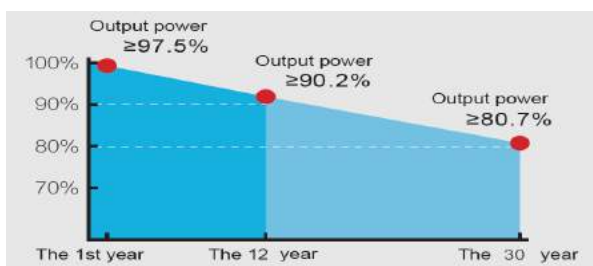
With the linear performance guarantee of 30 years and a product warranty of 12 years, TPL Solar guarantees highest investment security and warranty claims.



### Certificates

TPL Solar modules are CE and TUV certified. Meet Australia CEC standard and on CEC list. Fire safety Class C

### Performance Assurance



EN 61215:2005  
EN 61730-1:2007/A2:2013  
EN 61730-2:2007/A1:2012



**TPL ENERGY CO., LIMITED**  
**(TPL SOLAR)**

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### ELECTRICAL DATA

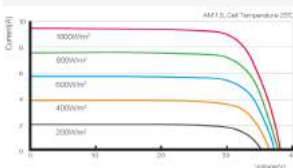
		TPL270M-60	TPL275M-60	TPL280M-60	TPL285M-60	TPL290M-60
Nominal power	Pm (Wp)	270	275	280	285	290
Open circuit voltage	Voc (V)	38.03	38.13	38.63	38.73	39.13
Short-circuit current	Isc (A)	8.74	8.79	9.44	9.49	9.59
Voltage at max power	Vmp (V)	31.31	31.50	31.81	32.10	32.20
Current at max power	Imp (A)	8.63	8.76	8.81	8.90	9.03
Module efficiency	(%)	17.00	17.30	17.60	18.00	18.35
Cells efficiency	(%)	19.02	19.3	19.62	19.97	20.37
System Voltage	(V)			1000		
Temp. coefficient Voc	(%; °C)			-0.36		
Temp. coefficient Isc	(%; °C)			0.06		
Temp. coefficient Pm	(%; °C)			-0.36		
Operating temp.	(°C)			-40 to +85		
NOCT	(°C)			45±2		

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m<sup>2</sup> with spectrum AM 1.5 and a cell temperature of 25°C.

### TECHNICAL DATA

Junction box	3 bypass diodes, IP67
Wire cross section (Ø, mm <sup>2</sup> )	4.0
Cable length (mm)	900
Connector type	MC4/MC4 compatible
Dimensions (L x W x H, mm)	1640 x 992 x 35
Weight (kg)	18.5
Cell dimensions (mm)	156 x 156
No of cells / assembly	60 / 6x 10
Type of cells	mono-crystalline
Hail resistance	Max. Ø 28 mm at 23 m/s
Wind load	2400Pa / 244kg / m <sup>2</sup>
Mechanical load	5400Pa / 550kg / m <sup>2</sup>

### I-V CURVE



### PACKING

	Container (20')	Container (40')
Pieces Per Pallet	30	30
Pallets Per Stack	2	2
Stacks Per Container	12	24
Pieces Per Container	360	840

### DIMENSIONS

