

# LIGHTWAY SOLAR

## POWER FOR A CHANGING WORLD



• Qualified, IEC 61215  
• Safety tested, IEC 61730  
• Periodic inspection



## LIGHTWAY SOLAR MODULE P 1650×990 Series

### KEY FEATURES



**Positive Tolerance 0-5W**  
Provides our customers with maximum power output



**Electric Current Classification**  
Lightway can classify solar modules based on the value of each module's electric current for customers



**Three bus bars ensure high power output of solar modules**



**Excellent weak light performance**



**Robust Aluminum Frames (40mm)**  
Designed for long term strength and stability in adverse environments



**Passed the 5400pa Test**



**Vertically Integrated Automatic Production Line**  
Allows us to strictly control quality and costs throughout the entire process



**Fully Automatic Stringing Machine and Laying up Machine**  
Guarantees excellent stringing quality and perfect appearance



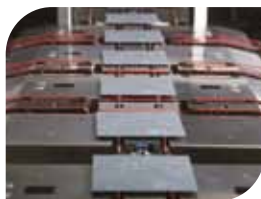
**Electroluminescence (EL) Testing**  
Tests before and after lamination avoid micro cracks and control the production quality with high efficiency



**Wafer and Cell Inspection**  
Every wafer and cell is inspected individually ensuring consistent performance in the modules



**Passed Ammonia Gas and Salt Mist Corrosion Resistance Test**  
Tested and approved by TUV Rheinland according to IEC 62716 Draft C and FprEN 61701 Ed.2



Wafer Sorting



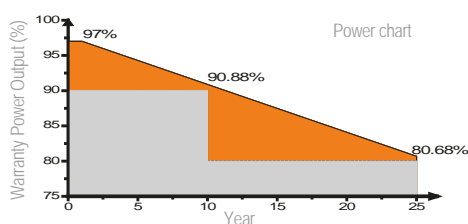
Automatic Stringing



EL Testing



Automation



#### ADDED VALUE WITH NEW LINEAR WARRANTY:

- 10 years material & workmanship limited warranty
- 1<sup>st</sup> year at 97% of the PEAK POWER AT STC
- 2<sup>nd</sup> - 25<sup>th</sup> year decline annually by no more than 0.68% of the PEAK POWER AT STC
- 25 years at least 80.68% of the PEAK POWER AT STC

### ELECTRICAL CHARACTERISTICS

Module Model Number	Unit	LW250(29) P1650×990	LW245(29) P1650×990	LW240(29) P1650×990	LW235(29) P1650×990	LW230(29) P1650×990	LW225(29) P1650×990	LW220(29) P1650×990
Maximum Power (Pmax)	W	250	245	240	235	230	225	220
Short Circuit Current (Isc)	A	8.89	8.73	8.56	8.45	8.38	8.28	8.18
Max-Power Current (Imp)	A	8.33	8.28	8.05	8	7.87	7.7	7.53
Open Circuit Voltage (Voc)	V	37.6	37.4	37.4	37.2	36.6	36.6	36.6
Max-Power Voltage (Vmp)	V	30	29.6	29.8	29.6	29.2	29.2	29.2
Module Efficiency	η (%)	15.3	15.1	14.7	14.4	14.1	13.8	13.5
Maximum System Voltage	VDC	1000						
Tolerance Rating	W	(0, +5)						
Operating Temperature	°C	-40~+85						
Over-Current Protection Rating	A	15						
Test Condition		STC: AM=1.5, 1000w/m <sup>2</sup> , Cell's Temperature: 25 C						

### MECHANICAL CHARACTERISTICS

Cell Type		Poly-Crystalline Silicon,60pcs(6×10)	
Cell Size	mm	156×156	
Thickness of Glass	mm	3.2	
Plugs / Certification / Cable Type		MC4 Type / USE-2, UL Certified, TUV Certified / 900 mm, 4 mm <sup>2</sup>	
No.of Bypass Diodes	pcs	6/3	
Withstand High Wind And Snow Loads	Pa	5400	

### TEMPERATURE CHARACTERISTICS

Pm Temperature Coefficient	%/K	-0.44071
Isc Temperature Coefficient	%/K	0.0691
Voc Temperature Coefficient	%/K	-0.33453

### PACKING

Weight	Kg	20.5
Packing		25/carton (28 palettes/40HQ-700pcs/40HQ)
Dimensions (l x w x h)	mm	1650×990×40

