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# **EnergyPal**

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

**Lubi Electronics**

**LE18M295-315**

**LE18M305**


Also available on the web at  
[EnergyPal.com/lubi-electronics-solar-panels/le18m305](http://EnergyPal.com/lubi-electronics-solar-panels/le18m305)





# Harvesting


THE POWER OF SUN


## KEY FEATURES


- 


5 Busbar solar cell adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance, making it perfect for rooftop installation.
- 


IP68 junction box for long-term weather endurance.
- 


Heavy snow load up to 5400 Pa.  
Wind load upto 2400Pa.
- 


Our high-transmission glass features a unique anit-reflective coating that directs more light on the solar cells, resulting in a higher energy yield.
- 

First choice for millions of banks and investors, this size is well-suited for almost all PV applications.
- 

Higher module conversion efficiency(up to 19%) benefit from Passivated Emmitter Rear Contact (PERC) technology
- 

Positive tolerance of up to 3% delivers higher output reliability.
- 

100% In-House automatic manufacturing.
- 

Certified for PID free modules.
- 

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

ISO9001:2015, ISO 14001:2004, OHSAS 18001:2007 certified company  
IEC61215, IEC61730, IEC62804(PID), IEC61701, IEC62716, IEC61853 certified products



# PERC MONO CRYSTALLINE SOLAR PV MODULE 5BB • 60 CELLS • 295 - 315 WATT

## Electrical Parameters at Standard Test Conditions STC & NOCT

Model Type	LE18M295		LE18M300		LE18M305		LE18M310		LE18M315	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Power Output Pmax (W)	295	220.66	300	224.40	305	228.14	310	231.88	315	235.62
Voltage at Pmax V <sub>mpp</sub> (V)	32.75	30.62	33.06	30.91	33.4	31.23	33.73	31.54	34.06	31.85
Current at Pmax I <sub>mpp</sub> (I)	9.01	7.21	9.08	7.26	9.14	7.31	9.2	7.35	9.25	7.40
Open-circuit Voltage VOC (V)	38.42	36.11	38.94	36.60	39.23	36.88	39.6	37.22	39.85	37.46
Short-circuit Current ISC (I)	9.53	7.66	9.56	7.68	9.64	7.74	9.71	7.80	9.76	7.84
Module Efficiency % (%)	18.14		18.44		18.75		19.06		19.36	

STC : 1000 W/m<sup>2</sup> irradiance, 25°C cell temperature, AM 1.5g spectrum according to EN 60904-3.  
NOCT : 800 W/m<sup>2</sup> irradiance, ambient temperature 20°C, wind speed 1 m/sec

## Thermal Characteristics

Nominal Operating Cell Temperature	NOCT	°C	46+/-2
Temperature Coefficient of Pmax	$\gamma$	%/°C	-0.350
Temperature Coefficient of VOC	$\beta$	%/°C	-0.301
Temperature Coefficient of ISC	$\alpha$	%/°C	0.05

## Operating Conditions

Max. System Voltage	1500Vdc
Max. Series Fuse Rating	15A
Limiting Reverse Current	20A
Operating Temperature Range	-40°C to 85°C
Max. Static Load, Front	5400Pa
Max. Static Load, Back (e.g., wind)	2400Pa
Max. Hailstone Impact (diameter / velocity)	25mm / 23.3 m / s

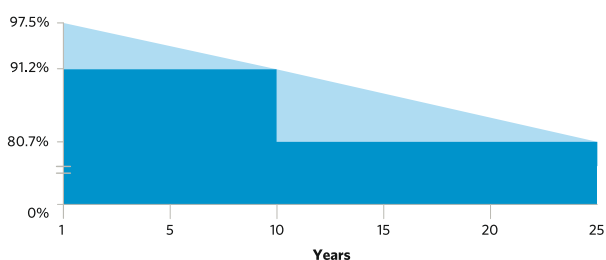
## Mechanical Data

Dimensions (L / W / H)	1641mm / 991mm / 35mm
Weight	18.3kg
Front Cover (material / thickness)	AR coated high transmission low iron tempered glass / 3.2 mm
Cell (qty. / material / dim./no. of busbars)	60 / PERC Monocrystalline Silicon / 156.75mm x 156.75mm / 5BB
Encapsulate (material)	Ethylene vinyl acetate (EVA)
Backsheet	UV Protected
Frame (material / color)	Anodized aluminum alloy / silver
Junction Box (protection degree)	IP68, 3 bypass diodes
Cable (length / cross-sectional area)	1200mm / 4mm <sup>2</sup>
Plug Connector (type / protection degree)	MC4 / IP68

## Packaging Specifications

Number of Modules Per Pallet	30
Number of Pallets per 40' Container	28
Packaging Box Dimensions (L / W / H)	1685mm / 1115mm / 1150mm
Box Weight	600kg

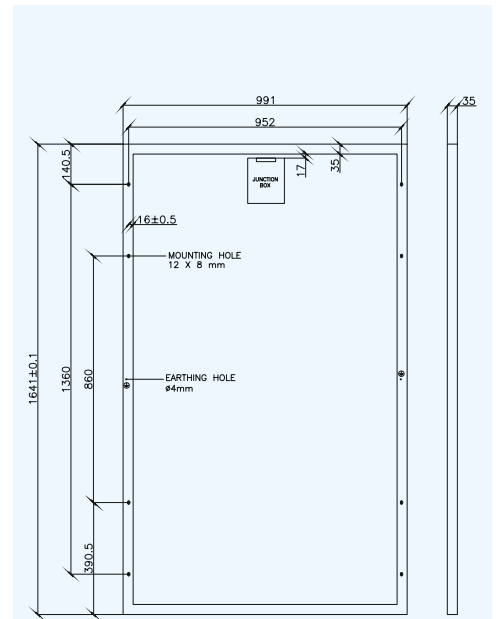
## Linear Performance Warranty



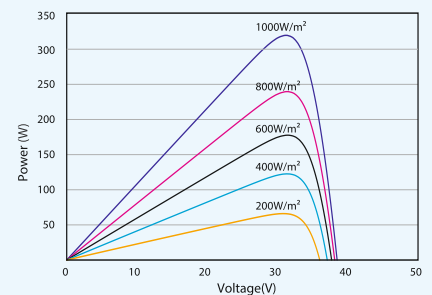
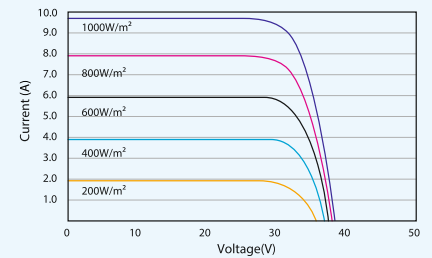
■ Lubi Linear Performance Warranty ■ Industry Standard Warranty

- 90% of the specified minimum output of the module for a 10 years period
- 80% of the specified minimum output of the module for a 25 years period
- 10-year product warranty
- 25-year linear performance warranty

## Engineering Drawing (mm)



## Electrical Performance



# PERC MONO CRYSTALLINE SOLAR PV MODULE 5BB • 72 CELLS • 360 - 380 WATT

## Electrical Parameters at Standard Test Conditions STC & NOCT

Model Type	LE24M360		LE24M365		LE24M370		LE24M375		LE24M380	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Power Output Pmax (W)	360	269.28	365	273.02	370	276.76	375	280.50	380	284.24
Voltage at Pmax V <sub>mpp</sub> (V)	39.65	37.07	39.95	37.35	40.28	37.66	40.59	37.95	40.78	38.13
Current at Pmax I <sub>mpp</sub> (I)	9.09	7.26	9.14	7.31	9.19	7.35	9.24	7.39	9.32	7.45
Open-circuit Voltage VOC (V)	46.85	44.04	47.08	44.26	47.37	44.53	47.73	44.87	47.21	44.38
Short-circuit Current ISC (I)	9.58	7.69	9.64	7.74	9.69	7.78	9.75	7.83	9.82	7.89
Module Efficiency % (%)	18.52		18.78		19.03		19.29		19.55	

STC : 1000 W/m<sup>2</sup> irradiance, 25°C cell temperature, AM 1.5g spectrum according to EN 60904-3.  
NOCT : 800 W/m<sup>2</sup> irradiance, ambient temperature 20°C, wind speed 1 m/sec

## Thermal Characteristics

Nominal Operating Cell Temperature	NOCT	°C	46+/-2
Temperature Coefficient of Pmax	$\gamma$	%/°C	-0.350
Temperature Coefficient of VOC	$\beta$	%/°C	-0.301
Temperature Coefficient of ISC	$\alpha$	%/°C	0.05

## Operating Conditions

Max. System Voltage	1500Vdc
Max. Series Fuse Rating	15A
Limiting Reverse Current	20A
Operating Temperature Range	-40°C to 85°C
Max. Static Load, Front	5400Pa
Max. Static Load, Back (e.g., wind)	2400Pa
Max. Hailstone Impact (diameter / velocity)	25mm / 23.3 m/s

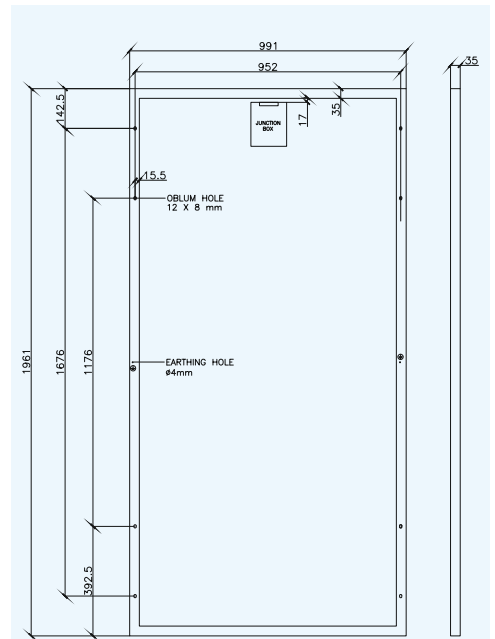
## Mechanical Data

Dimensions (L / W / H)	1961mm / 991mm / 35mm
Weight	21.5kg
Front Cover (material / thickness)	AR coated high transmission low iron tempered glass / 3.2 mm
Cell (qty. / material / dim./no. of busbars)	72 / PERC Monocrystalline Silicon / 156.75mm x 156.75mm / 5BB
Encapsulate (material)	Ethylene vinyl acetate (EVA)
Backsheet	UV Protected
Frame (material / color)	Anodized aluminum alloy / silver
Junction Box (protection degree)	IP68, 3 bypass diodes
Cable (length / cross-sectional area)	1200mm / 4mm <sup>2</sup>
Plug Connector (type / protection degree)	MC4 / IP68

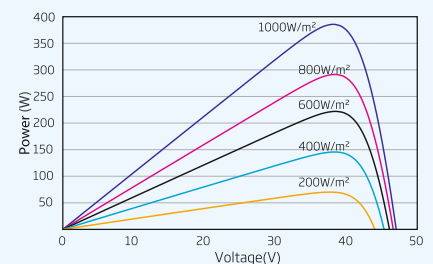
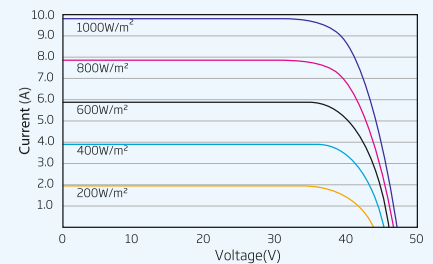
## Packaging Specifications

Number of Modules Per Pallet	30
Number of Pallets per 40' Container	24
Packaging Box Dimensions (L / W / H)	2005mm / 1115mm / 1150mm
Box Weight	700kg

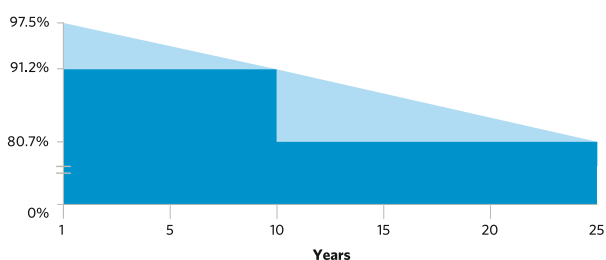
## Engineering Drawing (mm)



## Electrical Performance



## LINEAR PERFORMANCE WARRANTY



■ Lubi Linear Performance Warranty ■ Industry Standard Warranty

- 90% of the specified minimum output of the module for a 10 years period
- 10-year product warranty
- 80% of the specified minimum output of the module for a 25 years period
- 25-year linear performance warranty



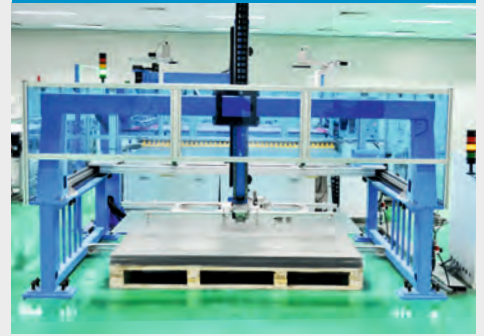
**STRINGER WITH AUTO-LAYUP**



**AUTOMATIC DOUBLE STAGE LAMINATOR**



**AUTOMATIC GLASS LOADING**



**AUTOMATIC EVA & BACKSHEET LOADING**



**FULLY AUTOMATIC CONVEYER**



**AUTOMATIC SUN-SIMULATOR**



## MANUFACTURING FACILITY

### 150 MW Fully Automatic Line

- PV module range from 5 Wp to 335 Wp
- Facility spread over 80,000 sq ft area
- CB Report for IEC 61215, 61730 1-2
- ISO 9001-2015, ISO 14001 & OHSAS 18001 certified company
- MNRE & STQC Approval

## QUALITY ASSURANCE

- High quality control standards
- High quality Component from International Supplier
- Enhanced reliability through use of distinctive encapsulant and back sheet
- PID free modules (85°C / 85RH for 288hrs)
- Optimized edge clearance for high quality rugged design
- 2x100 % Electroluminescence checking to ensure defect free modules.
- 100%In-line hi-pot testing (H.V+GB+IR)
- High FF for improved energy conversion efficiency
- Torsion and corrosion resistant with anodized aluminum frame
- Unique design of back-sheet for high resistance to moisture ingress

## APPLICATION

- Megawatt Installation
  - Solar Farms : 1MW to 50MW
- Rooftop Installation
  - Manufacturing Unit
  - Commercial office
  - Housing / Domestic power packs
- Emergency Backup
- Rural Power
- Solar Pumping applications
- Telecommunication
  - Cell Tower
- On-grid large scale utility systems



# Lubi Electronics

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