

**144** HALF-CUT  
SOLAR CELLS

**UP TO 22%**  
EFFICIENCY

**520-560 W**  
RANGE

**MBB MODULE**

At MKTEK Solpower India Private Limited, we are dedicated to transforming the way the world harnesses solar energy. Our commitment to innovation and sustainability drives us to manufacture high-quality PVC modules and offer comprehensive rooftop EPC (Engineering, Procurement, and Construction) services.

## PRODUCT | KEY FEATURES



MBB Mono PERC cell technology, Bifacial Transparent Back Sheet Module with 10BB with higher output power up to 560w



Glass with anti-reflective coating to maximize sunlight poten



Excellent low light performance with high module efficiency up to 22%



Pre and Post EL Checking to ensure defect free modules



Less shading and lower resistve loss



Excellent anti-micro cracking performance more balance interior stress



Durability against extreme environmental



### High Reliability

Using tempered glass and back sheet, which brings higher reliability and better anti-corrosiveness to the modulece in weak-light conditions



### Best in Class reliability

MKTEK Modules are able to withstand wind load 2400pa and snow load 5400Pa



### Higher Generation

Excellent temperature coefficient giving higher yields in the long term

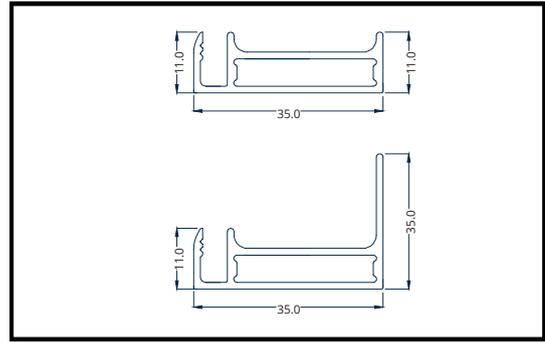
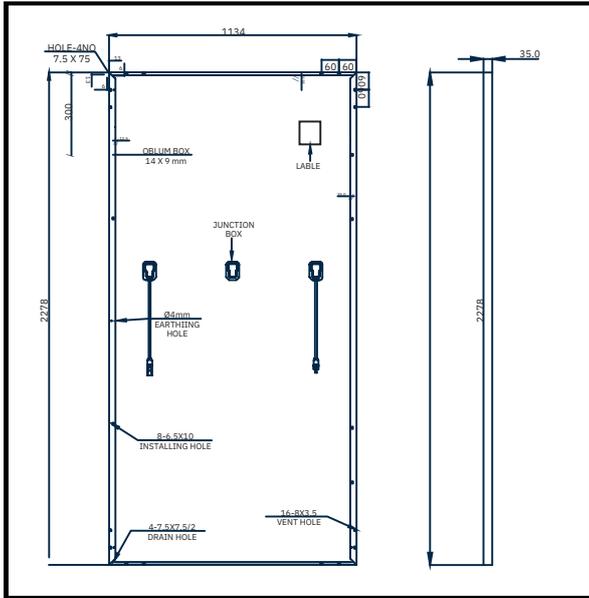
## APPLICATIONS

- ◆ On-Grid large scale utility systems
- ◆ On-Grid Rooftop residential, commercial and industrial rooftop installations
- ◆ Off-Grid Residential systems

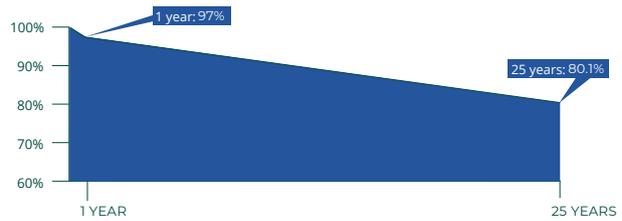
For handling & installation instructions refer MKTEK SolPower Installation Manual available on company website. Before placing order conform your requirement with our sales representative. The electrical data given here is for reference purpose only. Dispose-of the product as E-Waste after end of its working life. \*\* Refer to MKTEK SolPower warranty document for terms and conditions. Due to constant product modifications, MKTEK SolPower reserves the right to amend the above specifications without prior notice.

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

Electrical data without guarantee. Please conform your exact requirement with the company representative while placing your order.



### MKTEK Performance Warranty



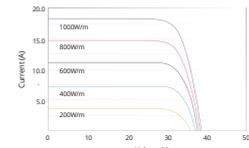
10 Years Product Warranty - 25 Years Linear Power Warranty

## ELECTRICAL DATA STC

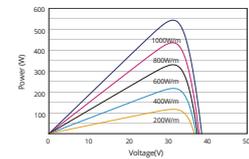
Module Type	MK144CMB 540Wp	MK144CMB 545Wp	MK144CMB 550Wp	MK144CMB 555Wp	MK144CMB 560Wp	MK144CMB 565Wp	MK144CMB 570Wp	MK144CMB 575Wp
Maximum Voltage V <sub>mpp</sub> (V)	41.70	41.90	42.00	42.20	42.40	42.60	42.80	43.00
Maximum Current I <sub>mpp</sub> (A)	12.95	13.01	13.10	13.16	13.21	13.27	13.32	13.38
Open Circuit Voltage V <sub>oc</sub> (V)	49.50	49.65	50.20	50.40	50.60	50.80	51.00	51.20
Short Circuit Current I <sub>sc</sub> (%)	13.85	13.92	13.87	13.93	13.99	14.0	14.11	14.17
Module Efficiency η (%)	20.9	21.1	21.3	21.5	21.7	21.9	22.1	22.3

\*STC: Irradiance 1000 W/m<sup>2</sup>, cell temperature 25°C, Air mass AM 1.5 according to ENC60904-3. Average efficiency reduce on is approx. 3% at 200 W/m<sup>2</sup> according to EN 60904-1. Except P<sub>mpp</sub>, all other parameter have tolerance of +/-3%, measurement uncertainty <3%.

I-V Curve Variation With Irradiation (545W)



P-V Curve Variation With Irradiation (545W)



\*All dimensions are in mm with +/-1% tolerance.

## MECHANICAL CHARACTERISTICS

Leangth	2278 mm
Width	1133 mm
Height	30 mm
Weight	28 kg
Junc on box	IP68
Cable and connectors	300 mm length cable, MC4 compatible connectors
Applica on Class	Class A (Safety class II)
Superstrate	High Transmission ARC glass 3.2 mm
Cells	N-type Bifacial 144 Half-cut cell
Encapsulation	High volume resistivity and low MVTR
Substrate	Transparent / Patterned Backsheet
Frame	Anodized Frame
Design Mechanical load	3600 Pa-downward; 1600 Pa-Upward
Safety Factor for Mechanical load	1.5
Maximum Series fuse ratng	30 A

Under Standard Test Conditions (STC) of irradiance 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C. Except P<sub>max</sub>, all other parameters have a tolerance of ±3%.

## PACKAGING CONFIGURATION

Container	40'HC		
Pallets / Container	20	Pieces / Container	720

## ELECTRICAL DATA NOCT

Electrical Specification

P<sub>max</sub> gain from rear side\*

	10%	15%	20%	25%	30%
Bifaciality Gain					
Peak power, (0 → +4.99 Wp) P <sub>max</sub> (Wp)	616	644	672	700	728
Maximum voltage, V <sub>mpp</sub> (V)	43.12	43.22	43.32	43.42	43.52
Maximum current, I <sub>mpp</sub> (A)	14.29	14.91	15.53	16.15	16.77
Open circuit voltage, V <sub>oc</sub> (V)	50.90	51.00	51.10	51.20	51.30
Short circuit current, I <sub>sc</sub> (A)	15.39	16.08	16.78	17.49	18.18
Module efficiency (%)	23.8	24.9	26.0	27.1	28.20

## THERMAL CHARACTERISTICS

Tc of open circuit voltage (β)	-0.26% /°C
Tc of short circuit current (α)	0.046% /°C
Tc of power (γ)	-0.31% /°C
Maximum system voltage	1500 VDC (IEC & UL)
NOCT	45°C ± 2°C
Temperature range	-40°C to + 85°C