

PAHAL[®] SOLAR

Solar PV Module Manufacturer



Pre & Post EL
checking to ensure
defect free modules.



IP68 High
Quality Split
Junction Box.



AR Coated
Tempered Glass.



High
Remuneration
on Savings.



Optimum Raw
Materials for best
quality & reliability.

PAHAL SOLAR'S EXCLUSIVE LINEAR HIGH PERFORMANCE WARRANTY

PRODUCT WARRANTY

10 years

PERFORMANCE WARRANTY

Output power 90% for 10 years
and 80% for 27 years

BIFACIAL | **144**
SOLAR PANEL | SERIES

525Wp to 550Wp



ELECTRICAL PARAMETERS

◆ PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)

(Irradiance of 1000 W/m², Spectrum AM 1.5 and Cell Temperature of 25°C)

Model Number	PS_525	PS_530	PS_535	PS_540	PS_545	PS_550
Capacity Rating - Pmax (Wp)	525	530	535	540	545	550
+Ve Power Tolerance (W)	0-5	0-5	0-5	0-5	0-5	0-5
Rated Voltage - Vmp (V)	40.80	40.94	41.10	41.36	41.62	41.87
Rated Current - Imp (A)	12.87	12.95	13.03	13.07	13.10	13.14
Open Circuit Voltage (Voc)	48.87	49.04	49.21	49.41	49.61	49.81
Short Circuit Current (Isc)	13.63	13.76	13.83	13.89	13.94	14.00
Module Efficiency (%)	20.35	20.53	20.73	20.92	21.11	21.30

◆ PERFORMANCE UNDER NOMINAL OPERATING CELL TEMPERATURE (NOCT)

(NOCT Irradiance of 800 W/m², Ambient Temperature of 20°C, Wind speed 1m/s, Average NOCT = 45 + 2°C)

Capacity Rating - Pmax (Wp)	389	393	396	400	404	407
Rated Voltage - Vmp (V)	38.65	38.81	38.96	39.20	39.45	39.69
Rated Current - Imp (A)	10.05	10.12	10.17	10.20	10.23	10.26
Open Circuit Voltage (Voc)	46.32	46.49	46.65	46.84	47.03	47.22
Short Circuit Current (Isc)	10.64	10.75	10.80	10.84	10.89	10.93

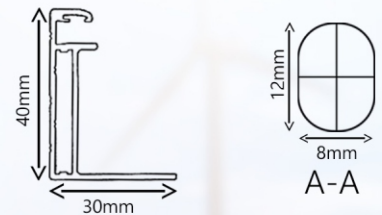
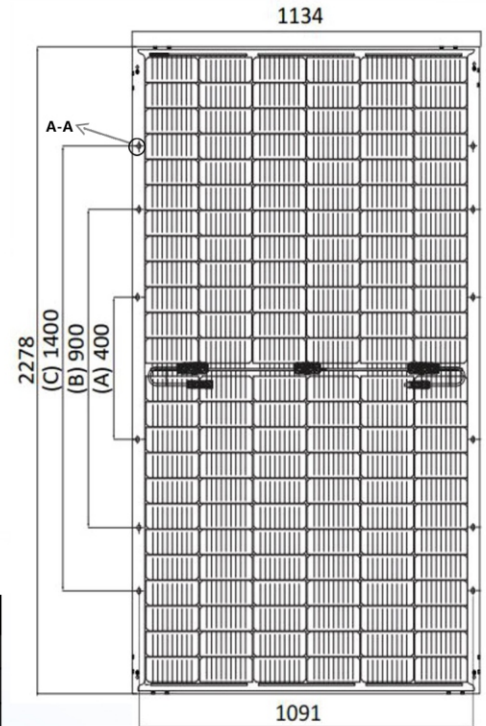
BI-FACIAL : Pmax WITH REAR SIDE POWER GAIN

Additional power gain from rear side compared to power of front side at STC depends on mounting structure (height, tilt angle, etc) and reflectivity of ground.

Bi-facial Factor : 70±5%

		PS_525	PS_530	PS_535	PS_540	PS_545	PS_550
5%	Power Output (W)	551	557	562	567	572	578
	Module Efficiency (%)	21.36	21.58	21.78	21.97	22.16	22.38
10%	Power Output (W)	578	583	589	594	600	605
	Module Efficiency (%)	22.40	22.58	22.82	23.01	23.24	23.43
15%	Power Output (W)	604	610	615	621	627	633
	Module Efficiency (%)	23.41	23.63	23.83	24.06	24.29	24.51
20%	Power Output (W)	630	636	642	648	654	660
	Module Efficiency (%)	24.42	24.64	24.88	25.10	25.33	25.56
25%	Power Output (W)	656	663	669	675	681	688
	Module Efficiency (%)	25.43	25.68	25.92	26.15	26.38	26.64
30%	Power Output (W)	683	689	696	702	709	715
	Module Efficiency (%)	26.47	26.69	26.97	27.20	27.46	27.69

DRAWING (MEASUREMENTS ARE IN MM)



MECHANICAL SPECIFICATIONS

Matrix / No. of Cells	144cell 2(12*6)
Cell Size (mm)	182*91
Cell Busbar	10
Dimensions (LXWXT) (mm)	2278*1134*40
Weight (kg)	28
Frame	Silver Anodized Aluminium Alloy
Glass	ARC Coated Low Iron Tempered
Encapsulant	EVA Sheet (PID free and UV Resistant)
Backsheet	Transparent Backsheet
Junction Box	Split JB - IP68, MC4 Compatible
Application Class Rating	Class A
Safety Class Rating	Class II
Mechanical Load Test	5400 Pa - Front / 2400 Pa - Back
X-Pitch (mm)	1091
Y-Pitch (mm)	(A) 400 (B) 900 (C) 1400

TEMPERATURE CO-EFFICIENTS

- Tk Isc %/°c 0.0264
- Tk Voc %/°c -0.2316
- Tk Pmax%/°c -0.3106

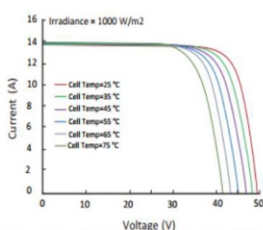
MAX. OPERATING CONDITIONS

- Operating Temperature -40 °c to +85 °c
- Max.System Voltage 1500 V
- Max.Series Fuse Rating 25 A
- NOCT Temperature 45 ° ± 2

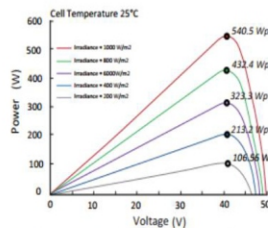
PACKING STANDARD

Frame Size	40 mm	
Vehicle	19 ft	32 ft
No. of Modules	192	432
No. of Pallets	8	16
Module per Pallet/ Weight	24/672	27/756

I-V CURVE WITH TEMPERATURE



P-V CURVE WITH IRRADIANCE



I-V CURVE WITH IRRADIANCE

