

**PINAK**

690 Wp - 715 Wp

N-TYPE TOPCON 16BB

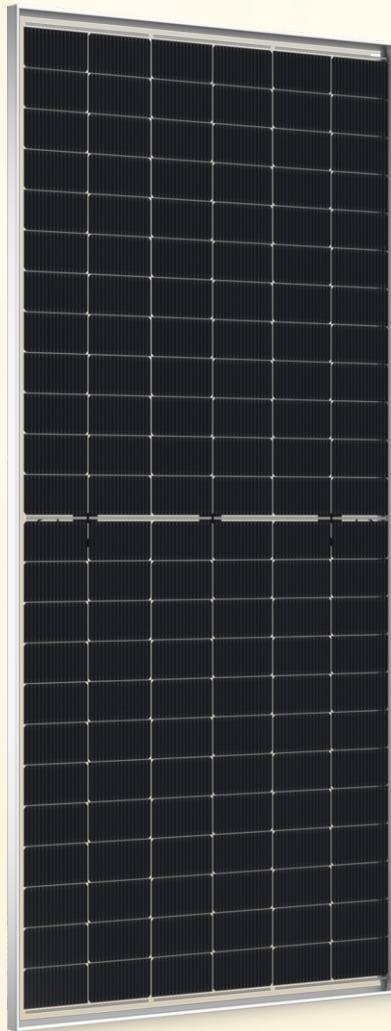
BIFACIAL (GLASS to GLASS)



**Product Warranty on Materials
and Workmanship 15 Years***



**Linear Performance
Warranty for 30 Years***



PRODUCT | KEY FEATURES



LOWER LCOE

- Lower balance of systems cost
- Improved value proposition of the product with competitive ROI



0% NEGATIVE POWER TOLERANCE

- Positive power tolerance of upto 0 ~ 4.99Wp
- Module current binning radically reduces string mismatch losses



IMPROVED LONGEVITY

- Excellent anti-PID performance via optimized process and materials control
- Lower susceptibility to LID & LeTID



PREMIUM PERFORMANCE PARAMETERS

- N-TYPE solar cell upto 80% bifaciality, brings higher energy yield from rear side
- Lower temperature coefficient minimizing generation losses at high temperature



SUPERIOR HAIL TEST PERFORMANCE

- Ø 45mm hail test passed from third party laboratory with impact velocity up to 27m/s



Management
Certificates
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

Product
Certificates
IS 14286/IEC 61215
IS/IEC 61730/1
IS/IEC 61730/2

TECHNICAL DATA

ELECTRICAL PARAMETERS | STC^{1,2}

Peak Power P _{max} (Wp)	690	695	700	705	710	715
Maximum Voltage V _{mpp} (V)	39.7	39.9	40.1	40.2	40.4	40.6
Maximum Current I _{mp} (A)	17.38	17.43	17.48	17.53	17.58	17.63
Open Circuit Voltage V _{oc} (V)	47.3	47.5	47.6	47.8	48.0	48.1
Short Circuit Current I _{sc} (A)	18.29	18.36	18.43	18.5	18.57	18.64
Module Efficiency (%)	22.21	22.37	22.53	22.70	22.86	23.02

1) Stc: 1000 W/M² Irradiance, 25°C Cell Temperature, Am1.5g Spectrum
According To En 60904-3 | 2) Tolerance Of Rating At Stc (P_{mp}/ I_{sc}/ V_{oc}) [%] :
0-3/±5/±5 | Electrical Measurement Uncertainty Is Within ± 2%

ELECTRICAL PARAMETERS | BNPI^{4,5}

Peak Power P _{max} (Wp)	765	770	776	781	787	792
Maximum Voltage V _{mpp} (V)	39.7	39.9	40.1	40.2	40.4	40.6
Maximum Current I _{mp} (A)	19.26	19.31	19.37	19.42	19.48	19.53
Open Circuit Voltage V _{oc} (V)	47.3	47.5	47.6	47.8	48	48.1
Short Circuit Current I _{sc} (A)	20.27	20.34	20.42	20.50	20.58	20.65

4) Bnpi: 1000 W/m² + φ.135, Bifacility Coeff. (φ) At Bnpi P_{max} I_{sc} Is 75±5% & For V_{oc} Is
99±10% , Am 1.5, 25°C | 5) Tolerance Of Rating At Bnpi (P_{mp}/ I_{sc}/ V_{oc}) [%] : 0-3/±5/±5

ELECTRICAL PARAMETERS | NOCT³

Peak Power P _{max} (Wp)	519.5	523.4	527.3	531.2	535.1	539
Maximum Voltage V _{mpp} (V)	37.1	37.2	37.3	37.4	37.5	37.6
Maximum Current I _{mp} (A)	14.03	14.08	14.13	14.18	14.23	14.28
Open Circuit Voltage V _{oc} (V)	44.4	44.6	44.8	45	45.2	45.4
Short Circuit Current I _{sc} (A)	14.78	14.83	14.88	14.93	14.98	15.03

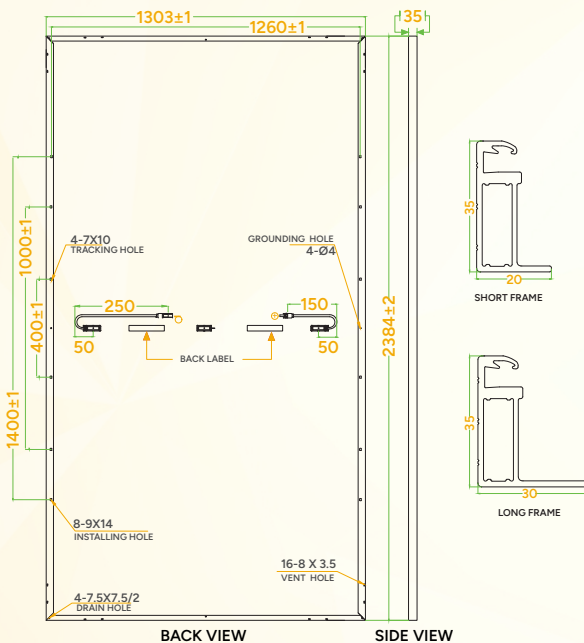
3) Noct Irradiance 800 W/M², Ambient Temperature 20°C, Wind Speed 1 M/sec

TEMPERATURE COEFFICIENTS (Tc)

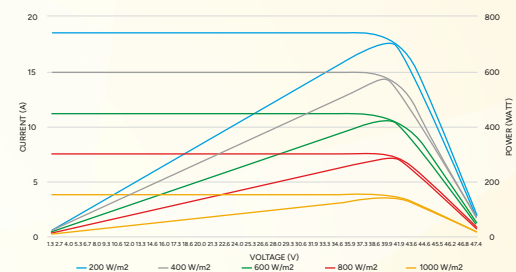
PERMISSIBLE OPERATING CONDITIONS

Tc of Open Circuit Voltage (β)	-0.26%/°C
Tc of Short Circuit Current (α)	0.046%/°C
Tc of Power (γ)	-0.30%/°C
Maximum System Voltage	1500V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

DIMENSIONS IN MM

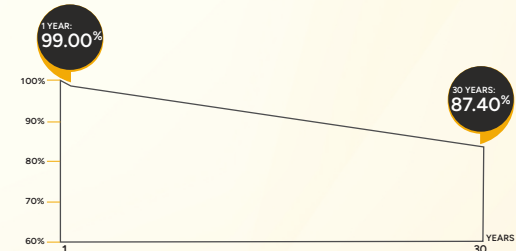


TYPICAL I-V CURVES⁶



6) Average Relative Efficiency Reduction Of 5% At 200 W/m² According To En 60904-1

PERFORMANCE WARRANTY



MECHANICAL DATA

Length x Width x Height	2384 X 1303 X 35 mm (93.86 x 51.30 x 1.38 inches)
Weight	39.5 Kg (87.08 lbs)
Junction Box	IP 68, Split Junction Box with individual bypass diodes
Cable & Connectors"	200 mm (+ve terminal) and 300 mm (-ve terminal) length cables, MC4 Compatible/MC4 Connectors
Application Class	Class A (Safety class II)
Superstrate ^{***}	2.0 mm (0.098 inches) high transmission ARC Semi-tempered glass (low iron content)
Cells	66 (132 half-cells) N-TYPE bifacial solar cells
Substrate	2.0 mm (0.098 inches) high transmission heat strengthened glass/ mesh glass ^{**} (low iron content)
Frame	Anodized aluminium/Alloy steel frame ^{**}
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Cell Encapsulant	EPE/EVA
Maximum Series Fuse Rating	30 A
Hail Test	Ø 45mm Impact Velocity up to 27m/s

WARRANTY

Product Warranty**	15 years
Performance Warranty**	Linear Power Warranty for 30 years with 1% for 1st year degradation and 0.4% from year 2 to year 30

PACKAGING INFORMATION

Quantity /Pallet	31
Pallets/Container	17
Quantity/Container	527

All () certifications under progress. | **Refer to ASOT Solar's warranty document for terms and conditions. | #400mm (15.75 inches), 1000mm (39.37 inches), 1200mm (47.24 inches) cable lengths are also available. | ##Anti-glare Glass is also available. | *As per applicable product. | **With additional cost & lead time subject to availability. | STC: Standard Testing Condition. | BNPI: Bifacial Nameplate Irradiance. | NOCT: Nominal Operating Cell Temperature.

CAUTION: Read safety and installation manual before using the product. Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order. ASOT Solar and all its accompanying logos are trademarks of Asote Solutions Pvt. Ltd. registered in India.