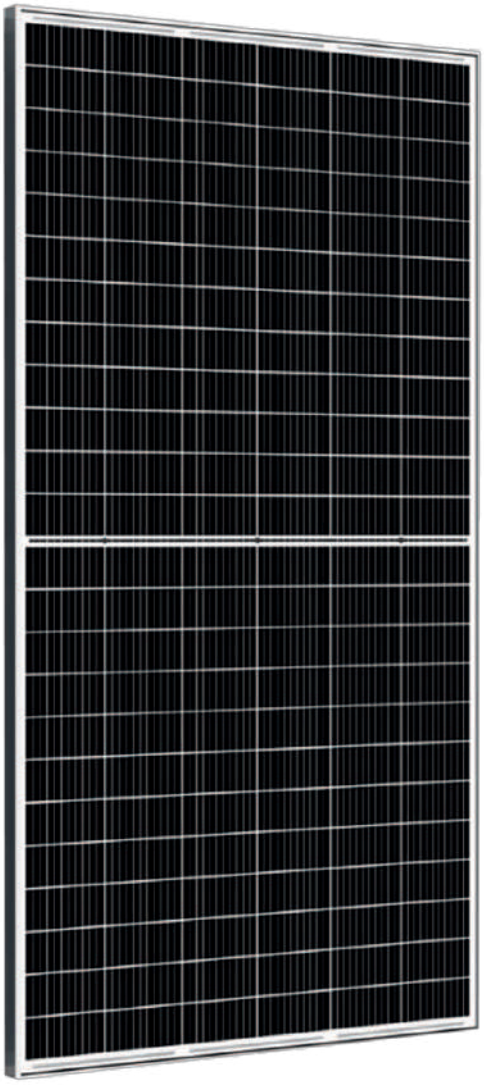
S4WD



Solar4WD
POWERING A SUSTAINABLE FUTURE

Solar Modules

MONO PERC 10BB
S4WD 450 - 460 Wp

Bifacial (Dual Glass with Silver Frame)

Solar4WD is a renowned distributor and supplier of high-quality and cost-effective solar energy solutions. With expertise in sourcing and supplying top-grade PV modules and a comprehensive range of solar products, we specialize in delivering reliable and efficient solar solutions to our clients. Our focus is on providing exceptional customer service and ensuring that our customers have access to the best solar products in the market. With Solar4WD as your trusted distributor and supplier, you can rely on us for all your solar energy needs.

- AR coated Tempered Glass
  Anti-Reflective Module Surface
- Excellent Module Efficiency with
  Mono PERC cells through 100% Automation
- Positive Power Tolerance with Current Binning to
  Prevent Mismatch Losses
- Pre and Post EL Checking with High Resolution
  Camera
- IP68 Junction Box for Long Term Endurance
- 100% Hi-Pot Testing to Ensure Safety
- MBB Half-Cell Technology provides Better
  Performance under Partial Shading

Product Code:

- S4B450SPX
- S4B455BPX
- S4B460BPX

30 Years — Linear Performance warranty*

15 Years — Product warranty on
materials and workmanship

info@solar4wd.com sales@solar4wd.com +1 (224) 366 1121 www.solar4wd.com

TECHNICAL DATA

ELECTRICAL PERFORMANCE [Note: Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty: < ±3%. Average value of NOCT: 44.28 ± 2 °C]

ELECTRICAL CHARACTERISTICS*	S4B450SPX	S4B455SPX	S4B460SPX
	STC NOCT	STC NOCT	STC NOCT
Nominal Maximum Power (Pmax)	450 W 334 W	455 W 337 W	460 W341 W
Optimum Operating Voltage (Vmp)	35.06 V32.28 V	35.37 V32.56 V	35.67 V32.84 V
Optimum Operating Current (Imp)	12.86 A10.33 A	12.89 A10.35 A	12.92 A10.38 A
Open Circuit Voltage (Voc)	41.18 V38.73 V	41.43 V38.97 V	41.66 V39.18 V
Short Ciruit Current (Isc)	13.54 A10.97 A	13.57 A10.99 A	13.61 A11.03 A
Module Efficiency	20.81 %	21.03 %	21.27 %

BIFACIAL OUTPUT – BACKSIDE POWER GAIN @ STC* [Bifaciality Factor: 75% ± 10%]

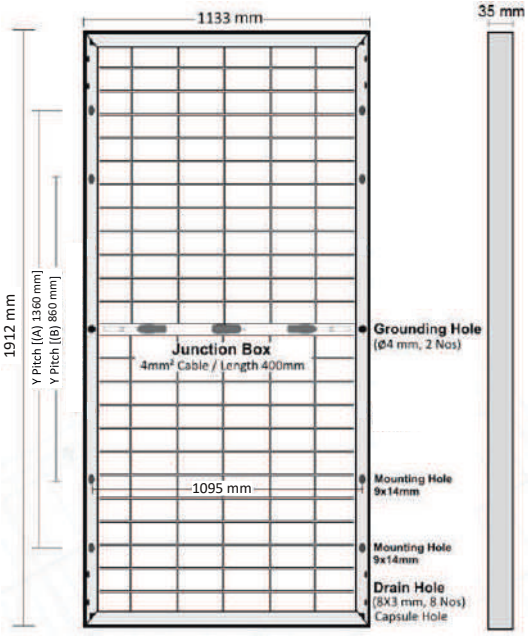
[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component ratings should be selected as per actual Bifacial gain at site (module currents indicated below)]

5%	Nominal Maximum Power (Pmax)	473 W	478 W	484 W
	Module Short Circuit Current / Efficiency	14.22 A / 21.86 %	14.25 A / 22.07 %	14.29 A / 22.36 %
10%	Nominal Maximum Power (Pmax)	496 W	501 W	507 W
	Module Short Circuit Current / Efficiency	14.89 A / 22.90 %	14.93 A / 23.13 %	14.97 A / 23.42 %
25%	Nominal Maximum Power (Pmax)	564 W	570 W	577 W
	Module Short Circuit Current / Efficiency	16.93 A / 26.02 %	16.96 A / 26.28 %	17.01 A / 26.61 %

Mechanical Specifications

Dimensions (L x W x T in mm)	1912 x 1133 x 35
Weight(kg)	27.7
Cell type / No Of Cell	120 Half-cut Mono PERC Bifacial Solar cells
Frame	Anodized Aluminum Alloy (6005, Temper T6, Silver colour)
Front Cover	Low Iron Heat-strengthened AR coated Glass (2 mm thick)
Encapsulate	PID resistant and UV resistant polymeric film
Back Cover	Low Iron Heat-strengthened Glass (2 mm thick)
Junction Box	Split Junction Box (3 nos. with individual Bypass Diode) – Weatherproof
Bypass Diode	(IP68) 50 A, 45 V, 200 °C max. junction temperature
Cable	4 sq. mm, 400 mm length (1200 mm available on request)
Connectors	MC4 compatible (MC4 original available on request)
Application Class Rating	Class A
Safety Class Rating	Class II
Mechanical Load Test (as per IEC &	5400 Pa-Front; 2400 Pa-Back
UL) Mounting Holes Pitch (Y)-mm	[A] 1360, [B] 860
Mounting Holes Pitch (X)-mm	1095

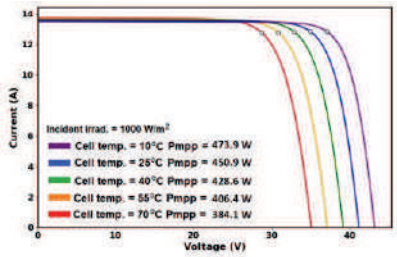
BACK VIEW



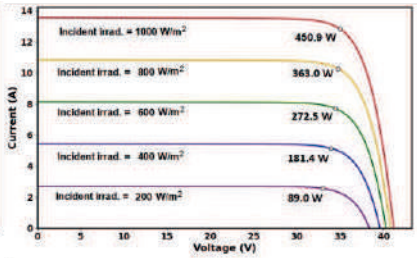
SIDE VIEW

*All dimensions are in mm with +/- 2mm tolerance.

IV Curve Varia on with Temperature

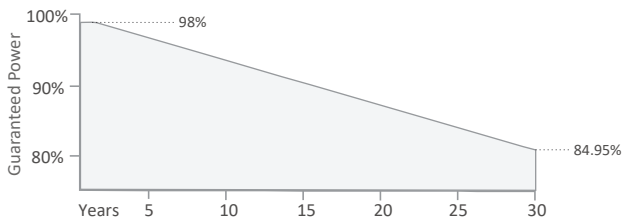


IV Curve Varia on with Irradiance



IV Curves for Front-Side Illumina on of 450 Wp Panel

LINEAR PERFORMANCE WARRANTY



*graphics shown herein above are reference purpose only.
Please consult Rayzon Solar Technical Team for any further clarification.

MAXIMUM OPERATING CONDITIONS

Operating Temperature:	-40°C to +85°C
Maximum System Voltage:	1500V
Maximum Series Fuse Rating:	25A

TEMPERATURE COEFFICIENTS

Current α(Isc) :	0.0286%/Ċ
Voltage β(Voc) :	-0.2488%/Ċ
Power ϒ(Pmax) :	-0.3290%/Ċ

STACKING STANDARD

	20FT	40FT
No. of Modules	155 806	
No of Pallets	522	
Modules per Pallet / Weight	31 Nos/910 Kg	31 Nos/910 Kg
Pallet dimensions	1950*1130*1275	1950*1130*1275

Cau on: Please read safety and installation instructions before using the product. ***Warranty**: Linear performance warranty for 30 years, with degradation up to 2% in 1st year and 0.6 %/year from year 2 to year 30. Please read Solar4WD warranty documents thoroughly. **Disclaimer**: Specifications included in the datasheet are subject to change without prior notice owing to continuous innovation in the Product Development and R&D Activities. Solar4WD reserves the right to make any adjustment to the information described here. Dataset contained in this specification do not form a representative of a single module data. @T&C Apply.