



## Solar Modules MONO PERC 10BB L'LIOS BLACK | 445 - 455 Wp

#### **PRODUCT | KEY FEATURES**



Anti-Reflective (AR) Coated Glass Anti-Reflective 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% High Voltage Testing to Ensure Safety



MBB Half-Cell Technology provides Better Performance under Partial Shading

#### THE INDUSTRY'S BENCHMARK

Rayzon Solar is an internationally renowned leading solar energy cost effective befitting solutions provider having core competency in high efficiency PV module manufacturing and providing EPC solution. Rayzon PV modules are the best in class in terms of power output and long-term reliability.

#### PRODUCT CERTIFICATES\*



#### MADE IN INDIA





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### TECHNICAL DATA

#### PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC) (irradiance of 1000 W/m², spectrum AM 1.5G and cell temperature of 25°C.)

Model Number	RSB445WC	RSB450WC	RSB455WC
Nominal Maximum Power (Pmax)	445 W	450 W	455 W
Power Tolerance	0 to +4.99 W	0 to +4.99 W	0 to +4.99 W
Optimum Operating Voltage (Vmp)	35.28 V	35.52 V	35.75 V
Optimum Operating Current (Imp)	12.62 A	12.69 A	12.75 A
Open Circuit Voltage (Voc)	41.07 V	41.27 V	41.47 V
Short Circuit Current (Isc)	13.24 A	13.30 A	13.36 A
Module Efficiency	20.55 %	20.80 %	21.04 %
Fill Factor Note: Power Measurement uncertainty: < ±3%	81.91 %	82.11 %	82.27 %

#### PERFORMANCE UNDER NOCT (NOCT = 45.25°C irradianc of 800 W/m², ambient temperature of 20°C and Wind speed 1 m/s)

Maximum Power (Pmax)	329 W	333 W	337 W
Optimum Operating Voltage (Vmp)	32.48 V	32.70 V	32.92 V
Optimum Operating Current (Imp)	10.14 A	10.19 A	10.24 A
Open Circuit Voltage (Voc)	38.63 V	38.82 V	39.01 V
Short Circuit Current (Isc)	10.72 A	10.77 A	10.82 A

#### **Mechanical Specifications**

Dimensions (L x W x T in mm) 1912 x 1133 x 35

Weight(kg) 23.9

Cell type / No Of Cell 120 Half-cut Mono PERC Solar cells

Frame Anodized Aluminum Alloy (6005, Temper T6, Black colour)
Front Cover ARC coated Low Iron Tempered Glass (3.2 mm thick)

Encapsulate Ethylene Vinyl Acetate (EVA) Sheet - PID resistant and UV resistant
Back Cover Plasma Treated Fluoro-Based polymeric Backsheet (Black colour)
Junction Box (3 nos. with individual Bypass Diode) – Weathern

unction Box Split Junction Box (3 nos. with individual Bypass Diode) – Weatherproof (IP68)

Bypass Diode 40 A, 45 V, 200  $^{\circ}$ C max. junction temperature

Cable 4 sq. mm, 400 mm length (Customized cable length available on request)

Connectors MC4 compatible (MC4 original available on request)

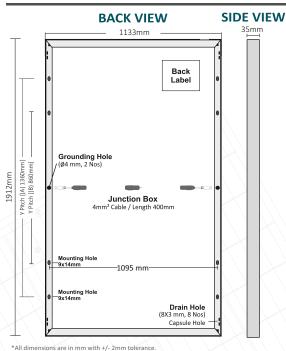
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Application Class Rating Class A Safety Class Rating Class II

Mechanical Load Test (as per IEC & UL) 5400 Pa-Front; 2400 Pa-Back

Mounting Holes Pitch (Y)-mm [A] 1360, [B] 860

Mounting Holes Pitch (X)-mm



#### **IV Curve Variation with Temperature IV Curve Variation with Irradiance** nt irrad. = 1000 W/m<sup>2</sup> 450.7 W Incident irrad. = 800 W/m2 360.5 W ર્કે B nt irrad. = 600 W/m<sup>2</sup> 269.7 W ■ Cell temp. = 10°C Pmpp = 473.1 W Cell temp. = 25°C Pmpp = 450.8 W Incident irrad. = 400 W/m<sup>2</sup> 177.9 W Cell temp. = 40 °C Pmpp = 428.4 W Cell temp. = 55°C Pmpp = 406.1 W Cell temp. = 70°C Pmpp = 383.8 W ent irrad. = 200 W/m<sup>2</sup> 86.3 W

#### IV Curves Shown for 450 Wp Panel

# 100% 98% 90% - 98% 80.6% Years 5 10 15 20 25 30

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

MAXIMUM OPERATING CONDITIONS		TEMPERATURE COEFFICIENTS		STACKING STANDARD	20FT	40FT
Operating Temperature:	-40°C to +85°C	Current α(Isc) :	/ / / /	No. of Modules No of Pallets	155	682 22
Maximum System Voltage:	1500V	Voltage $\beta$ (Voc):	-0.2470%/Ċ	No of Pallets Modules per Pallet / Weight	31Nos/790Kg	31Nos/790Kg
Maximum Series Fuse Rating:	25A	Power Y(Pmax):	-0.3303%/Ċ	Pallet dimensions	1950*1130*1275	1950*1130*1275

Caution: 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 Rayzon 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. RAYZON SOLAR 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.