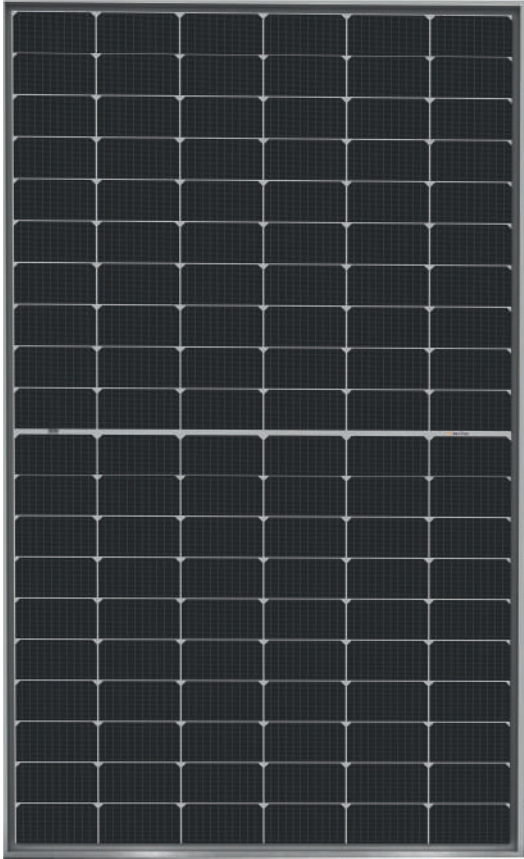













MONO PERC BIFACIAL – 120 CELLS

KNR-S-120 MBHC(440-445Wp)



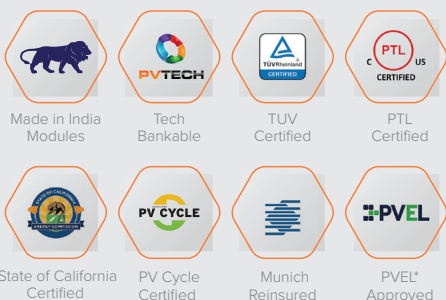
Key Features

- 
High Module Conversion Efficiency
 Module efficiency up to 20.00% achieved through advanced cell technology and manufacturing process.
- 
Advanced Technology
 MBB- Multi Busbar (10BB) / Halfcut MONOPERC cells / Ga Doped Wafers
- 
Positive Tolerance Cell Output
 Guaranteed 0~+4.99 Wp positive tolerance to ensure power output
- 
Excellent Weak Light Performance
 Advanced glass and surface texturing allow for excellent performance in low-light environment.
- 
Extended Wind and Snow load Tests
 Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).
- 
Excellent PID Resistance
 Excellent Anti-PID performance guarantee limited power degradation and certified for up-to 288 Hrs.
- 
Withstanding Harsh Environment
 Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline, ammonia.
- 
Rigorous Testing Criteria
 100% EL inspection ensuring defect-free modules.
- 
Current Sorting
 To minimize the current mismatch losses to maximize system power output.
- 
Standard
 Tested and qualified as per UL standard.
- 
Bifacial factor 70+5%
 The ratio of rear efficiency in relation to the front efficiency subject to the same irradiance.

Certifications & standards

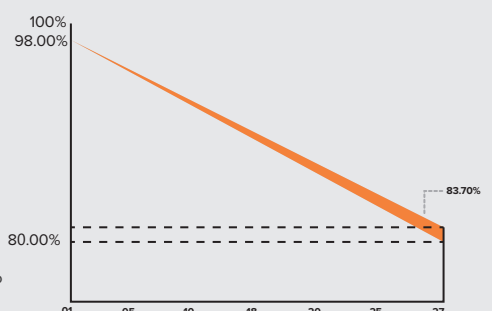
IEC 61215, IEC 61730,
 IEC 61701, UL 61215, UL 61730,
 CEC, IEC 61853-1 lam, IEC
 62804, IEC 62716, IEC 61701,
 IEC 60068-2-68, IEC 61853, IS
 14286

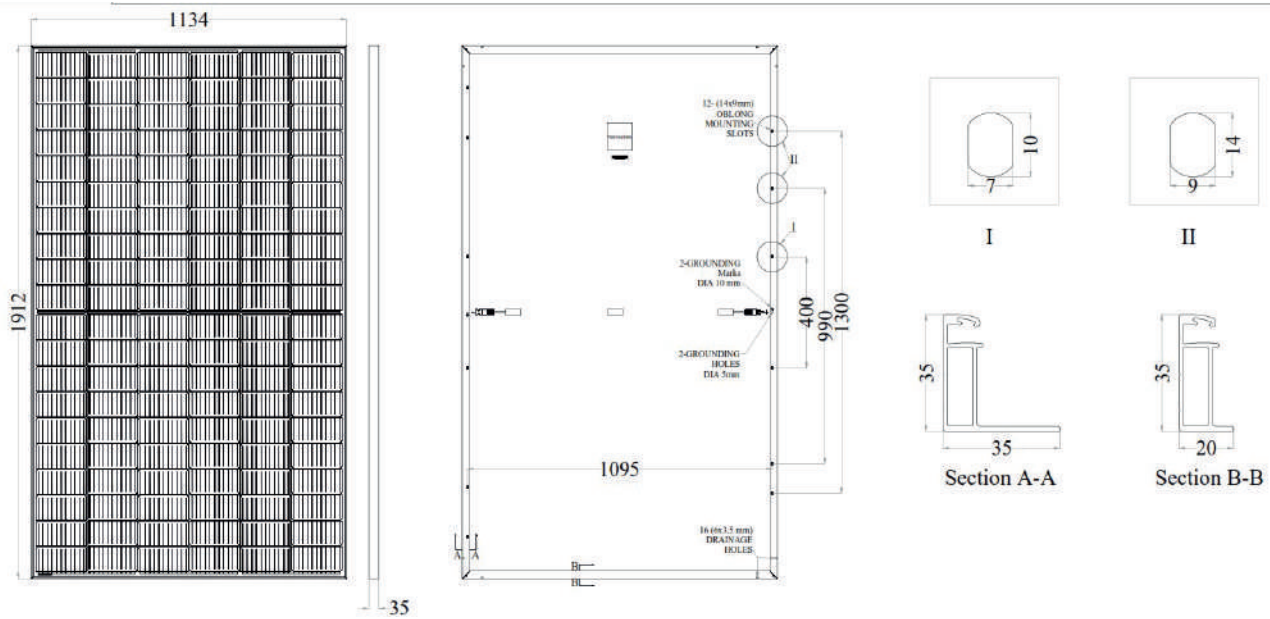
Certifications



Linear Performance Warranty

Product Warranty 12 Years:
 Material & Processing.
 First year Degradation Upto-2%
 Linear Power output 27 Years :
 2-27 Annual degradation -0.55%





ELECTRICAL DATA PERFORMANCE

Condition	Unit	STC	NOCT	STC	NOCT
Peak Power Pmax(0 ~+ 4.99)Wp	Wp	440	329.5	445	333.3
Maximum voltage, Vmpp	V	33.93	31.43	34.11	31.59
Maximum current, Impp	A	12.97	10.48	13.05	10.54
Open circuit voltage, Voc	V	40.72	37.71	40.93	37.91
Short circuit current, Isc	A	13.62	11.00	13.70	11.07
Fill factor	%	79%	78%	79%	78%
Module Efficiency	%	20.29		20.52	

TC: Irradiance 1000 W/m² module temperature 25° C, Am=1.5; NOCT: Irradiance 800 W/m², ambient temperature 20° C, Am=1.5, Wind speed 1m/s. Average power reduction of 4.5% at 200 W/m² as per IEC 60904-1. Measuring Uncertainty +/- 3%

Bifacial Gain	Measurement	Unit	440	445
5%	Max. Power	Wp	462	467
10%	Max. Power	Wp	484	490
15%	Max. Power	Wp	506	512

MODULE MECHANICAL DATA

SPECIFICATION	DATA
Operating Temp.	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Fuse rating	25A
Power Tolrence	0~+3%
Temperature coefficients of Pmax	-0.36%/°C
Temperature coefficients of Voc	-0.28%/°C
Temperature coefficients of Isc	0.048%/°C
Nominal operating cell temperature (NOCT)	45 ± 2 °C
Fire Safety	Type IV
Application	Class-A
Safety Class	Class II
Cell Type	MONOPERC Halfcut
No of Cell	120 Halfcut
Dimension	1912X1134X35
Weight	24 kg
Front Cover	3.2 ARC Glass
Rear Cover	Transparent/Pattern
Frame Material	Aluminium Black
J-Box	IP67
Cable Length	1200 mm
Connector Type	MC4 Connector
Standard Packaging	31
No. of pallet	24
Module Per Container (40HC)	744

