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N-type

RIOxxxW-144BIF-2278

xxx=580-600 in step of 5W

BIFACIAL MODULE WITH DUAL GLASS

N-Type

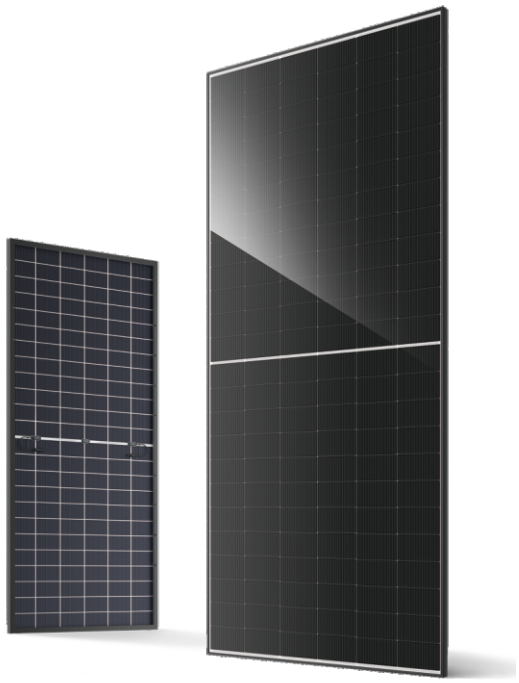
Positive power tolerance of 0~+3%

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018
Occupational health and safety management systems



Key Features

SMBB Technology

Better light trapping and current collection to improve module power output and reliability.

Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.

PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.

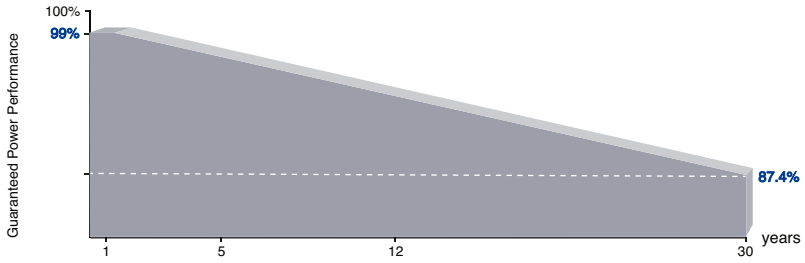
Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

Higher Power Output

Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR

LINEAR PERFORMANCE WARRANTY

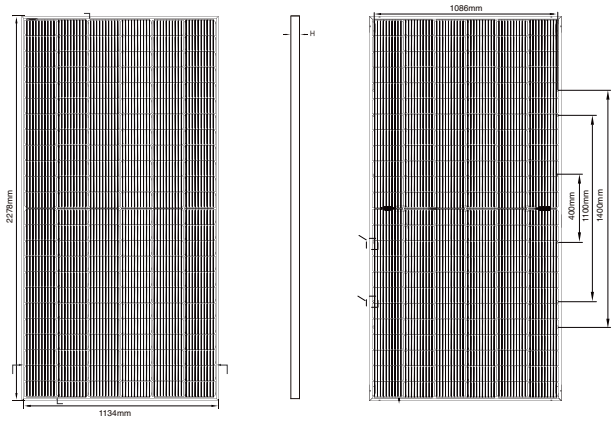


12 Year Product Warranty

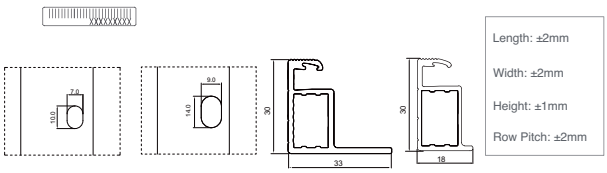
30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years

Engineering Drawings



Front Side Back



Length: ±2mm

Width: ±2mm

Height: ±1mm

Row Pitch: ±2mm

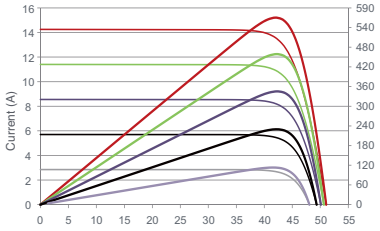
Packaging Configuration

(Two pallets = One stack)

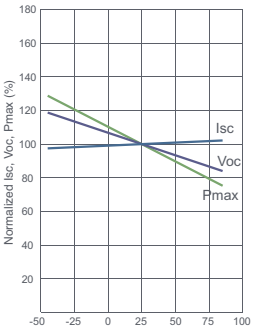
37pcs/pallets, 74pcs/stack, 740pcs/ 40'HQ Container

Electrical Performance & Temperature Dependence

Current-Voltage & Power-Voltage Curves (570W)



Temperature Dependence of Isc,Voc,Pmax



Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	144 (6×24)
Dimensions	2278×1134×30mm (89.69×44.65×1.18 inch)
Weight	32 kg
Front Glass	2.0mm, Anti-Refiection Coating
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Polyurethane Frame
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm (+): 400mm , (-): 200mm or Customized Length

SPECIFICATIONS

Module Type	RIO580W-144BIF-2278		RIO585W-144BIF-2278		RIO590W-144BIF-2278		RIO595W-144BIF-2278		RIO600W-144BIF-2278	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	580Wp	437Wp	585Wp	441Wp	590Wp	445Wp	595Wp	448Wp	600Wp	452Wp
Maximum Power Voltage (Vmp)	43.88V	40.89V	44.02V	41.05V	44.17V	41.21V	44.31V	41.40V	44.45V	41.50V
Maximum Power Current (Imp)	13.22A	10.69A	13.29A	10.74A	13.36A	10.79A	13.43A	10.84A	13.50A	10.89A
Open-circuit Voltage (Voc)	52.50V	49.87V	52.70V	50.06V	52.90V	50.25V	53.10V	50.44V	53.30V	50.63V
Short-circuit Current (Isc)	13.95A	11.26A	14.01A	11.31A	14.07A	11.36A	14.13A	11.41A	14.19A	11.46A
Module Efficiency STC (%)	22.5%		22.7%		22.8%		23.0%		23.2%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	30A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.29%/°C									
Temperature coefficients of Voc	-0.25%/°C									
Temperature coefficients of Isc	0.045%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									
Refer. Bifacial Factor	80±5%									

*STC: Irradiance 1000W/m² Cell Temperature 25°C AM=1.5

NOCT: Irradiance 800W/m² Ambient Temperature 20°C AM=1.5 Wind Speed 1m/s

Specifications included in this datasheet are subject to change without notice.

TSUN POWER