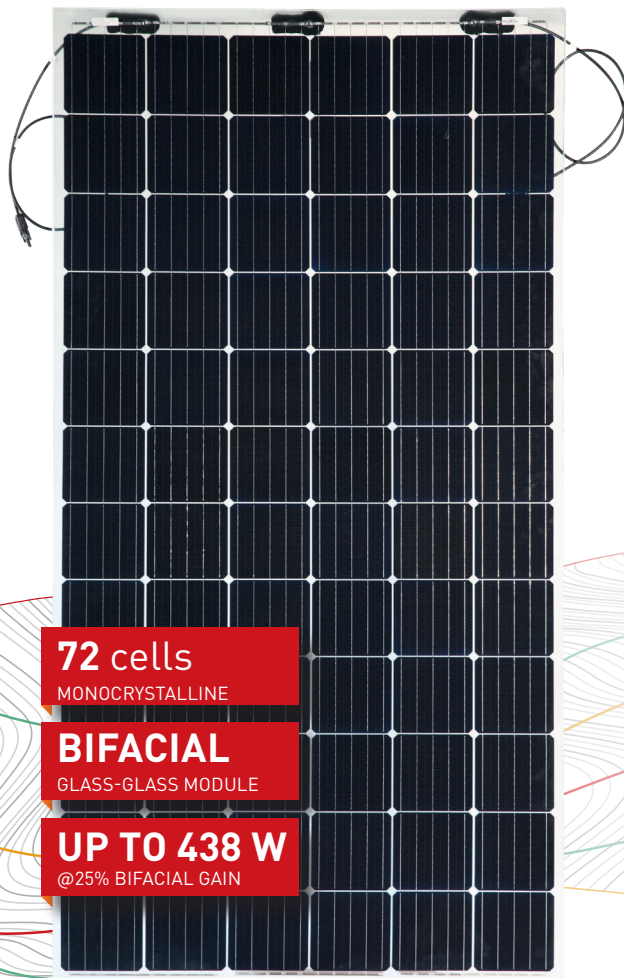


# SOMERA N-DUPLEX

## 72 SERIES

FRAMELESS,  
N-TYPE BIFACIAL MODULE



**72 cells**  
MONOCRYSTALLINE

**BIFACIAL**  
GLASS-GLASS MODULE

**UP TO 438 W**  
@25% BIFACIAL GAIN



**ZERO LID** using N-type cells



**UP TO 25% POWER GAIN** from rear side depending on albedo and installation



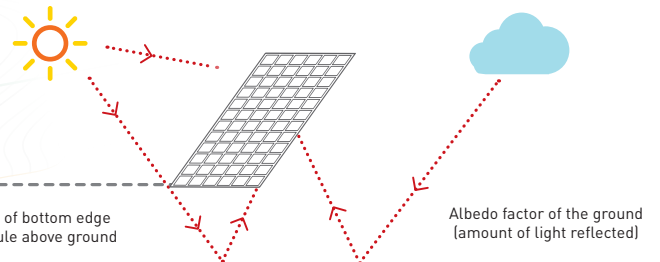
**UP TO 30 YEARS** linear power warranty



**NEAR ZERO PID** due to **HIGHLY RESISTIVE ENCAPSULANT** & frameless design



**MAXIMUM SYSTEM VOLTAGE INCREASED TO 1500VDC** (IEC & UL), increased string length, low BOS cost



### QUALITY AND SAFETY

- ◆ 30 years of linear power output warranty \*\*
- ◆ Rigorous quality control meeting the highest international standards
- ◆ 100% EL tested to minimise micro crack
- ◆ Fire rating: (TYPE 10, Class B)

### APPLICATIONS

- ◆ Rooftop & utility scale applications
- ◆ Greenhouse applications
- ◆ Agricultural industry applications

# TECHNICAL DATA

## SOMERA N-DUPLEX 72 SERIES

THE DATASHEET IS APPLICABLE FOR: SOMERA VSMD.72.AAA.05 (AAA=330-350)

### Electrical Data (Front Side)<sup>1,2</sup>

Peak Power- $P_{max}$	330	335	340	345	350
Maximum Voltage $V_{mpp}$ (V)	37.8	38.0	38.1	38.1	38.1
Maximum Current $I_{mpp}$ (A)	8.73	8.82	8.93	9.06	9.18
Open Circuit Voltage $V_{oc}$ (V)	46.3	46.6	46.8	47.2	47.4
Short Circuit Current $I_{sc}$ (A)	9.18	9.26	9.37	9.44	9.56
Module Efficiency $\eta$ (%)	16.84	17.10	17.35	17.61	17.86

1) STC:1000 W/m<sup>2</sup> irradiance, 25°C Cell Temperature, AM1.5g spectrum | 2) power measurement uncertainty is within +/- 3%

### Electrical Parameters at NOCT<sup>3</sup>

Power (W)	246.3	250.0	253.7	257.5	261.2
Isc (A)	8.91	8.99	9.10	9.17	9.28
Voc (V)	35.1	35.3	35.5	35.8	35.9
I@Pmax (A)	6.56	6.63	6.71	6.81	6.90
V@Pmax (V)	34.8	35.0	35.1	35.1	35.1

3) NOCT irradiance 800 W/m<sup>2</sup>, ambient temperature 20°C, wind speed 1 m/sec

### Equivalent Bifacial Output

Bifacial Gain	Overall Power output(W)				
10%	363	369	374	380	385
15%	380	385	391	397	403
20%	396	402	408	414	420
25%	413	419	425	431	438

### Temperature Coefficients (Tc) and permissible operating conditions

Tc of Open Circuit Voltage ( $\beta$ )	-0.26%/°C
Tc of Short Circuit Current ( $\alpha$ )	0.052%/°C
Tc of Power ( $\gamma$ )	-0.35%/°C
Maximum System Voltage	1500 V (IEC & UL)
NOCT	46 °C ± 2°C
Temperature Range	-40°C to + 85°C

### Mechanical Data

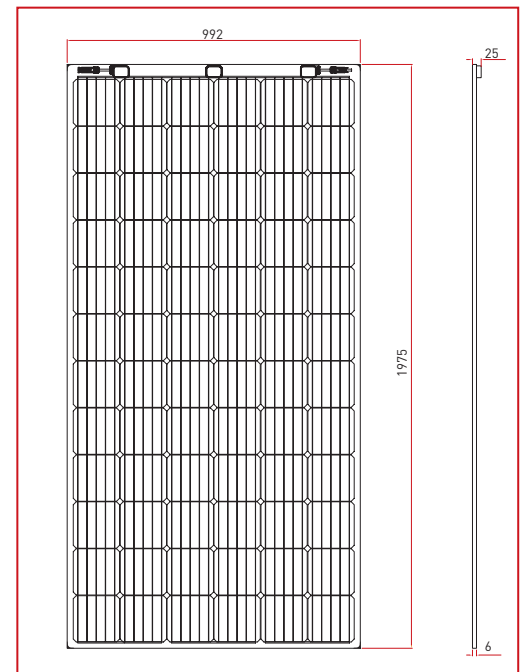
Length × Width × Height	1975 × 992 × 6 mm (77.76 × 39.05 × 0.23 inches)
Weight	27 kg (59.525 lbs)
Junction Box	FT30xy (ZJRH), FT50xy (ZJRH), JM07 (JMTHY)
Cable	H1Z2Z2-K(ZJRH)
Connectors	PVKST4-EV02/xy_UR/PVKBT4-EVO 2/xy_UR (Staubli Electrical Connectors AG), PV-JM608 (JMTHY), 05-8 (ZJRH)
Application Class	Class A (Safety class II)
Superstrate	2.5 mm (0.098 inches) high transmission, AR coated
Cells	72 monocrystalline N-type bifacial 5BB solar cells
Substrate	2.5 mm (0.098 inches) high transmission float glass
Cell Encapsulant	Polyolefin (POE)
Mechanical Load Test	1600 Pa, 1.5 (Front and rear)
Maximum Series Fuse Rating	20A

### Warranty

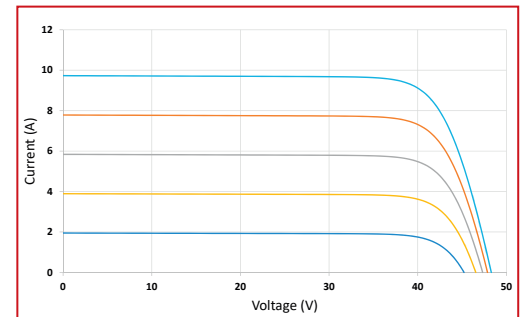
Product Warranty**	10 years
Performance Warranty**	30 year Linear Power Warranty, with power degradation < 0.50 % / year
Approvals and Certificates	IEC 61215:2016, IEC 61730:2016, IEC61701, UL1703, CE

\*\* Refer to Vikram Solar's warranty document for terms and conditions. | \*1200mm (47.24 inches) cable length is also available

### Dimensions in mm

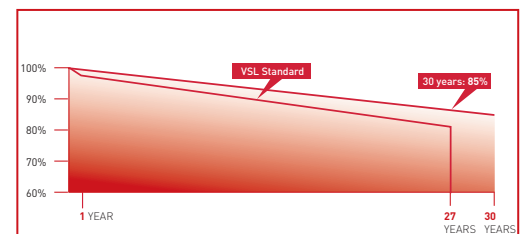


### Typical IV Curve<sup>4</sup>



4) Average relative efficiency reduction of 5% at 200 W/m<sup>2</sup> according to EN 60904-1.

### Linear Performance Warranty



**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. \*Vikram Solar & Somera are Trademarks of Vikram Solar Limited registered in India  
Country of manufacturer: India

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