



DCR CONTENT MODULE AVAILABLE



# SOVA SOLAR


# TOPCon

## Glass to Glass Bifacial Modules (590W)

Upto 25% more output with rear side



### KEY FEATURES

-  Module power increases 5-25% & LCOE reduces significantly, Bifacial module
-  16BB Technology for better current conduction & improved Module output
-  Excellent performance at low LIGHT condition
-  Longer Life power yield
-  Less power loss by minimizing Shading effect
-  Sustain heavy Snow Load (5400pa) & Wind Load (2400pa)

### APPLICATIONS

- Utility-Scale and C&I Projects
- Rooftop Solar Systems
- On-Grid Solar Systems
- Hybrid Solar Systems
- BESS
- Solar Water Pumping Systems
- Solar Farms / Solar Parks
- Solar Battery Charging Systems
- Floating Solar Projects

### CERTIFICATIONS



MINIMUM EFFICIENCY  
**22.87%**

POSITIVE POWER TOLERANCE WP  
**0~+4.99**

CELLS  
**M10R 144**

MODULE TECHNOLOGY  
**HALF CUT & MICRO GAP DESIGN**



THIS DATASHEET IS APPLICABLE FOR : TOPCon BIFACIAL GLASS TO GLASS MODULES (590W)

### Electrical Characteristics Pmax uncertainty value at STC is ±3%.

Module Type	<b>SS590144HCGT</b>
Maximum Power at STC (Pmax)	590 W
Optimum Operating Voltage (Vmp)	42.85 V
Optimum Operating Current (Imp)	13.77 A
Open Circuit Voltage (Voc)	51.06 V
Short Circuit Current (Isc)	14.48 A
Module Efficiency (%)	22.87 %

### Temperature Characteristics (As per IEC test report)

Temperature Coefficient of Pmax (γ)	-0.3851 % / °C
Temperature Coefficient of Voc (β)	-0.3280 % / °C
Temperature Coefficient of Isc (α)	0.0495 % / °C

### Electrical Characteristics with Different Rearside Power Gain

Rear side Power Gain	5%	15%	25%
Maximum Power at STC (Pmax)	619	678	737
Optimum Operating Voltage (Vmp)	42.94	42.95	42.93
Optimum Operating Current (Imp)	14.43	15.80	17.18
Open Circuit Voltage (Voc)	50.96	50.96	51.06
Short Circuit Current (Isc)	15.20	16.65	18.10
Module Efficiency	23.99%	26.28%	28.57%

### Operating Parameters

Max. System Voltage	DC 1500V
Operating Temperature	-40°C to ~ +85°C
Max. Fuse Rated Current	30A
Front Static Load	5400Pa(112lb/ft <sup>2</sup> ) (Snow Load)
Back Static Load	2400Pa(50lb/ft <sup>2</sup> ) (Wind Load)
Bifaciality	80%±10%

### Mechanical Characteristics

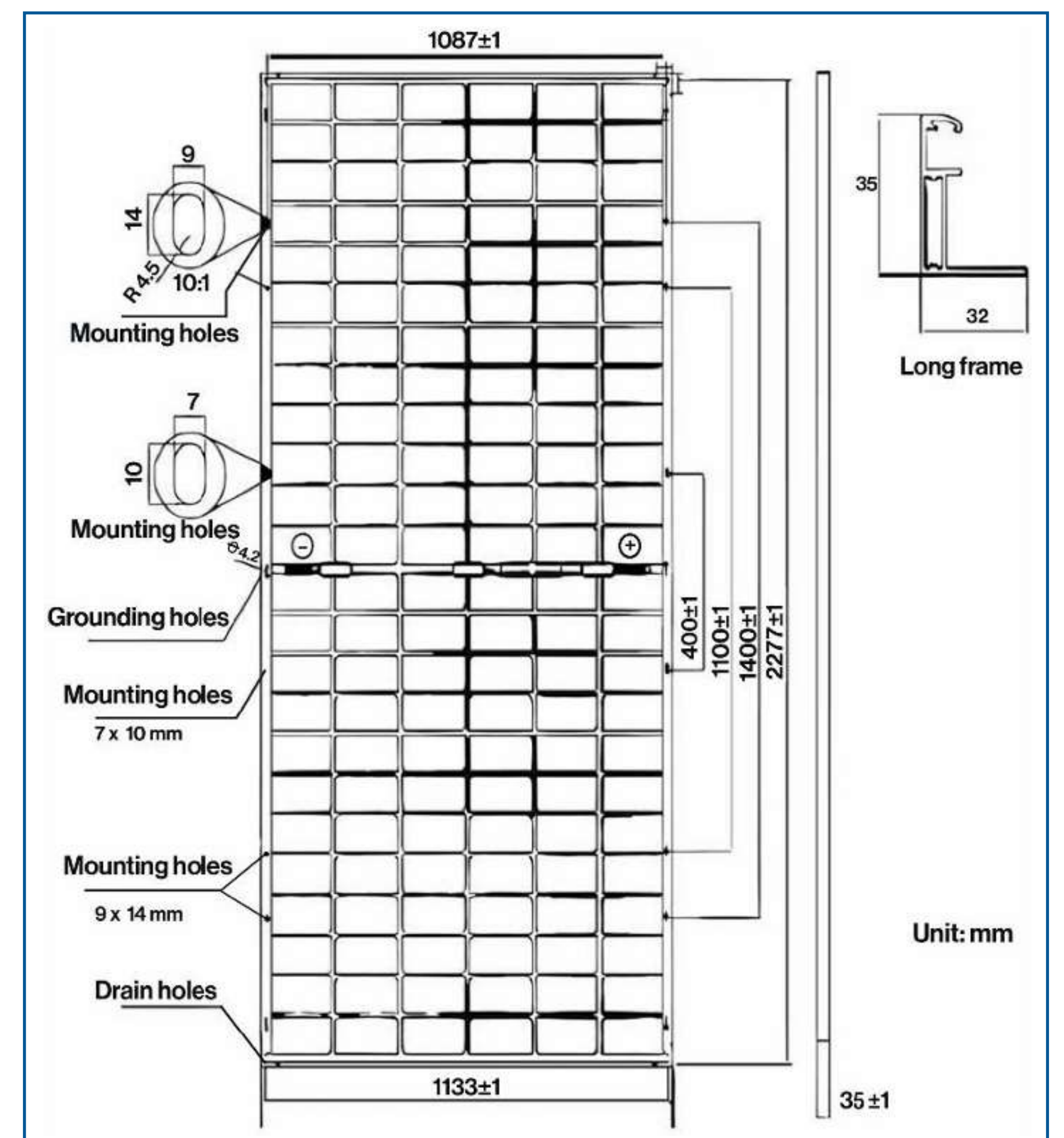
Cell Type	N type TOPCon Technology
No. of cells	144 (6*24)
Dimensions (Length x Width x Height)	2277 x 1133 x 35 ± 1 mm
Weight	31.2 Kg
Front Side	2 mm ARC Semi tempered Glass
Back Side	2 mm semi tempered Glass
Frame	Anodized Aluminium Alloy
Mounting Hole (Oblong)	9*14 & 7*10 ± 1mm
Mounting Hole CTC distance – vertical	1400, 1100, 400 ± 1mm
Mounting Hole from corner	438.5, 588.5, 938.5 ± 1mm
Mounting Hole CTC distance horizontal	1087 ± 1mm
Junction Box	IP68 Rated
Output Cables	1200mm(+ve Terminal), -1200mm(-ve Terminal)

### Warranty and Certifications

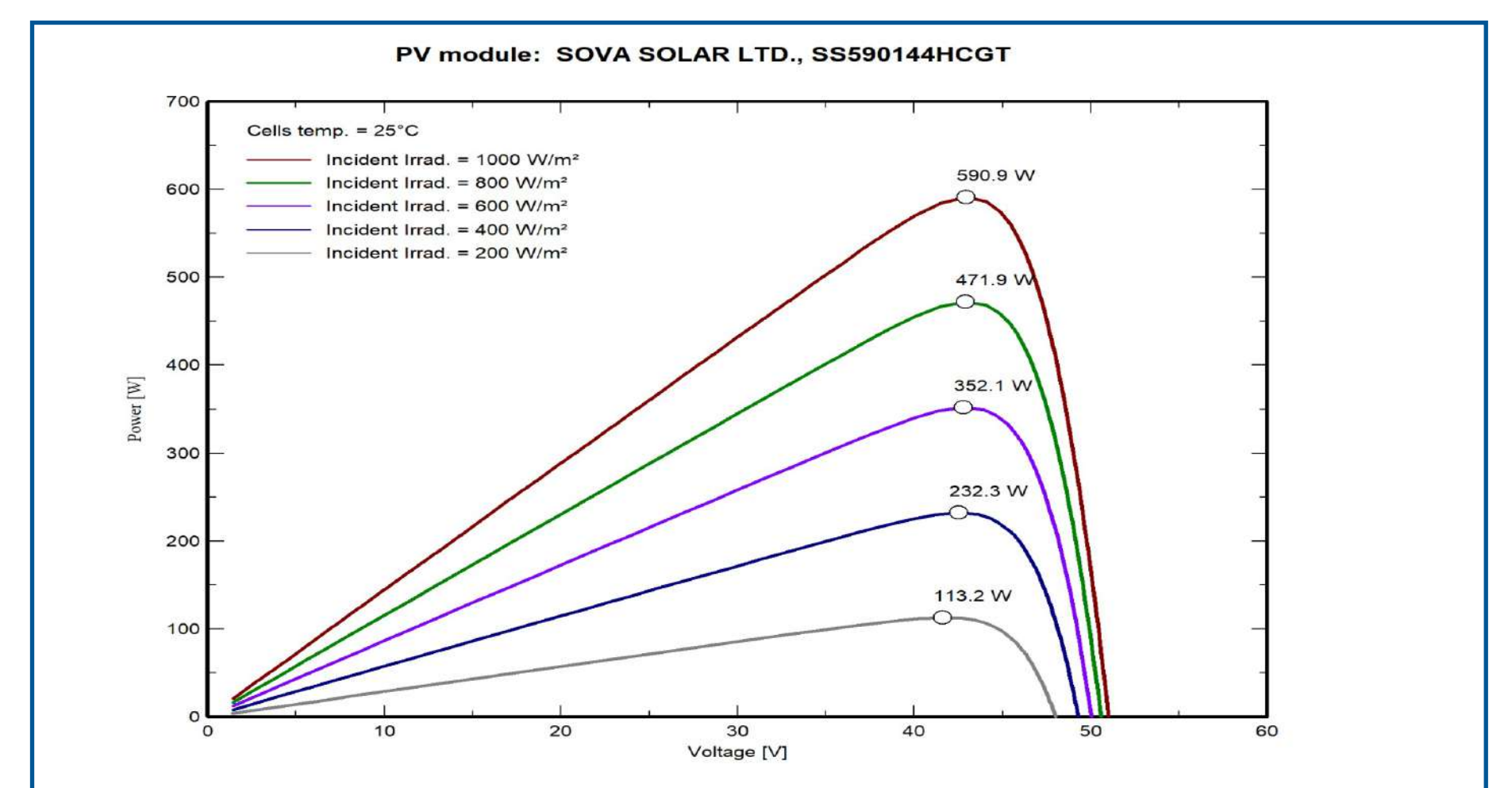
Product Warranty**	12 years
Performance Warranty**	30-year linear power output warranty with 1% degradation in the first year, followed by 0.40% annual degradation for the remaining 29 years.
Approvals and Certificates	BIS, IEC 61215:2021 IEC 61730:2016 Part 1 & 2 IEC 62716:2013 IEC 62804-1:2015 IEC 61701:2020 IEC 61853-1:2011 IAM, LETID, LID

\*\* Refer to Sova Solar's warranty statement for terms and conditions. | # 350mm, 1400mm., 1600mm cable lengths are also available | ## Anti-glare Glass is also available

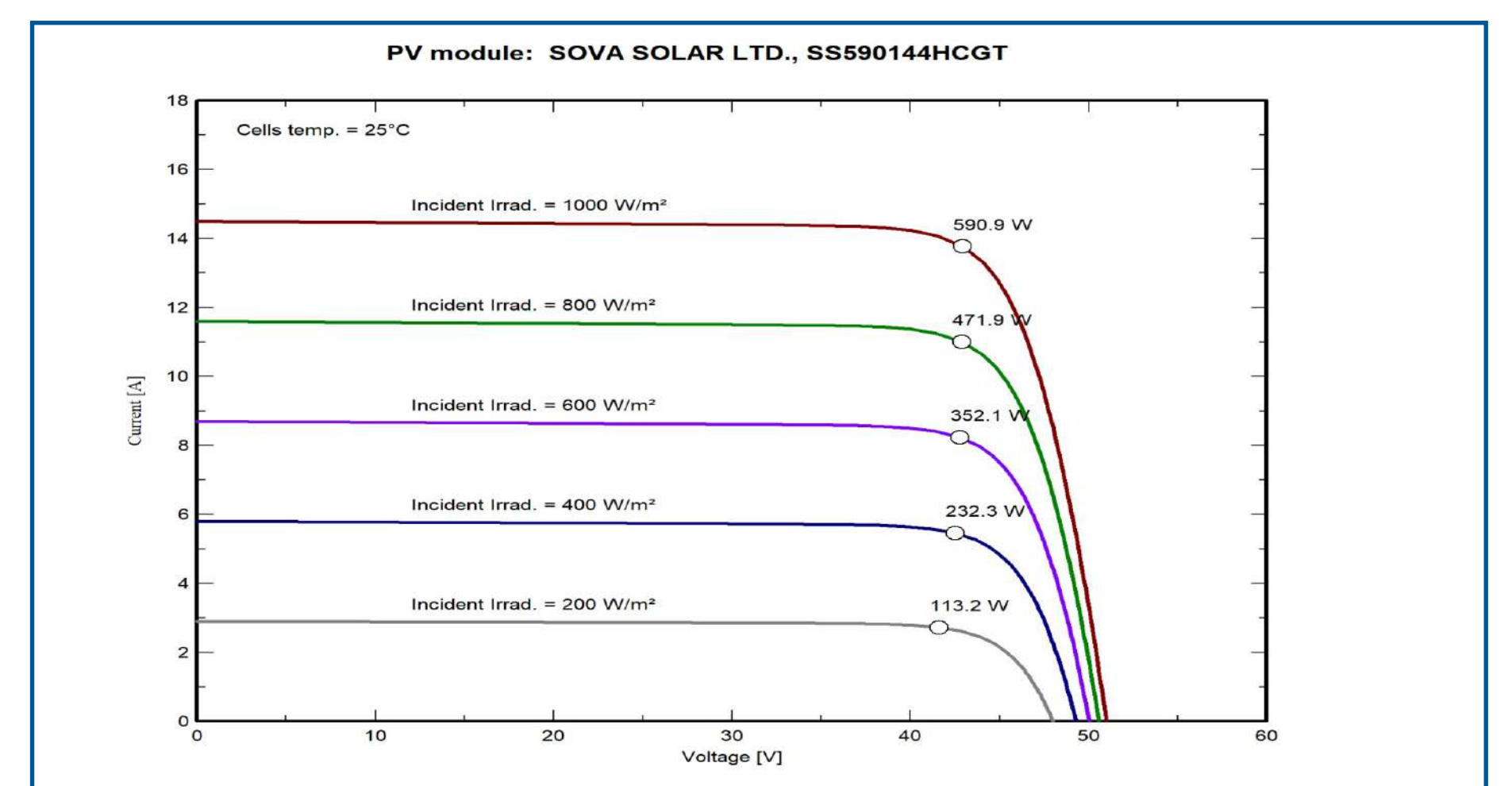
### Dimensions in mm



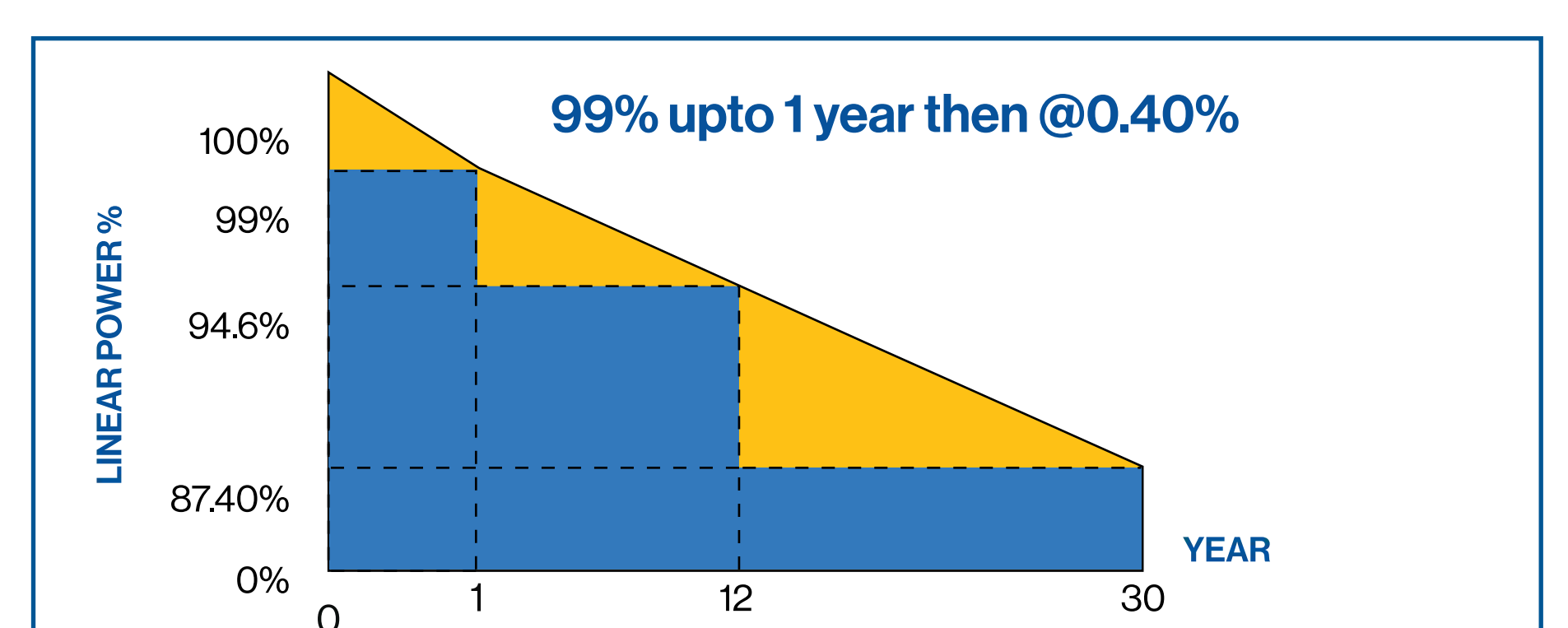
### Typical I-V Curves<sup>4</sup> (power vs voltage)



### Typical I-V Curves<sup>4</sup> (current vs voltage)



### Performance Warranty



### Packaging Information

Vehicle Details	40 feet	19 feet
Quantity /Pallet	31Pcs	28 Pcs
Weight/Pallet	1054 Kgs	952 Kgs
Pallets/Vehicle	20 Pcs	8 Pcs
Quantity/Vehicle	620 Pcs	224 Pcs

**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.

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