

STM-XXX/144-S2 9BB Series 440W-465W

25
years
Linear power
output warranty

12
years

Guarantee on
product
Material and



9 Busbar Solar Cell

9 Busbar solar cell adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance, making it perfect for rooftop installation.



High Efficiency

Higher module conversion efficiency (up to 21.27%) benefit from half cell structure (low resistance characteristic).



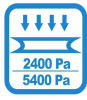
PID Resistance

Excellent Anti-PID performance guarantee limited power degradation for mass production.



Low-light Performance

Advanced glass and cell surface textured design ensure excellent performance in low-light environment.



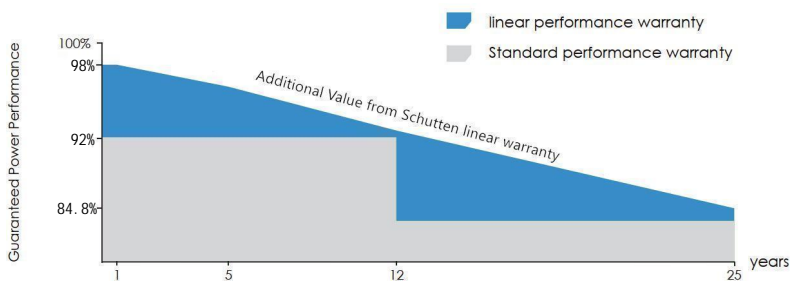
Severe Weather Resilience

Certified to withstand: Wind load (2400 pascal) and snow load (5400 pascal).



Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance certified by TUV NORD.



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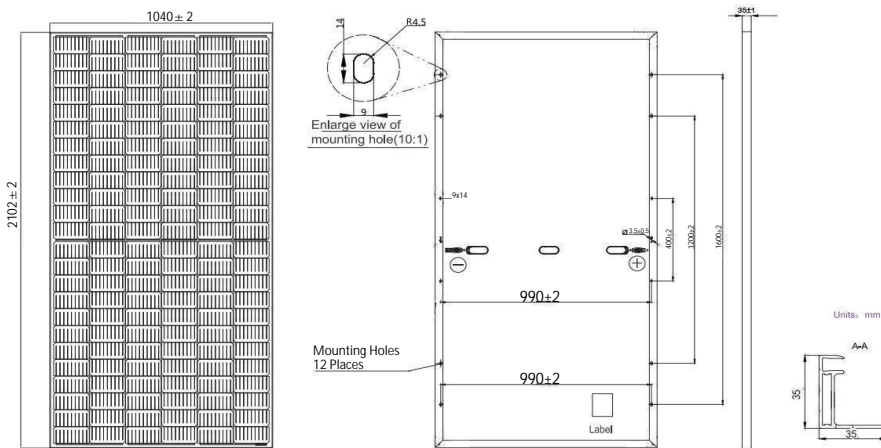
Electrical Characteristics at STC

Module Type	STM-440/144-S2	STM-445/144-S2	STM-450/144-S2	STM-455/144-S2	STM-460/144-S2	STM-465/144-S2
Maximum Power (Pmax)	440	445	450	455	460	465
Open-circuit Voltage (Voc)	49.40	49.56	49.70	49.85	50.01	50.15
Maximum Power Voltage (Vmp)	40.90	41.21	41.52	41.82	42.13	42.43
Short-circuit Current (Isc)	11.28	11.32	11.36	11.41	11.45	11.49
Maximum Power Current (Imp)	10.76	10.80	10.84	10.88	10.92	10.96
Module Efficiency STC (%)	20.13	20.36	20.58	20.81	21.04	21.3
Power Tolerance	0-+5W					
Temperature Coefficient of Isc (α -Isc)	+0.044%/°C					
Temperature Coefficient of Voc (β -Voc)	-0.272%/°C					
Temperature Coefficient of Pmax (γ -Pmp)	-0.350%/°C					
STC	☀ Irradiance 1000W/m ²		🌡 Cell Temperature 25°C		🌤 AM=1.5	

Electrical Characteristics at NOCT

Module Type	STM-440/144-S2	STM-445/144-S2	STM-450/144-S2	STM-455/144-S2	STM-460/144-S2	STM-465/144-S2
Rated Max Power (Pmax)	333	336	340	344	348	352
Open-circuit Voltage (Voc)	46.40	46.65	46.90	47.15	47.38	47.61
Maximum Power Voltage(Vmp)	38.70	38.95	39.19	39.44	39.68	39.90
Short-circuit Current (Isc)	9.16	9.20	9.25	9.29	9.33	9.38
Maximum Power Current (Imp)	8.60	8.64	8.68	8.72	8.76	8.81
NOCT	☀ Irradiance 800W/m ²		🌡 Cell Temperature 20°C		🌤 AM=1.5	
	🌬 Wind Speed=1m/s					

Mechanical Diagrams



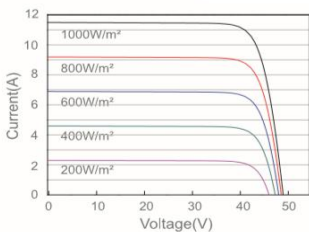
Remark: customized frame color and cable length available upon request

Specifications

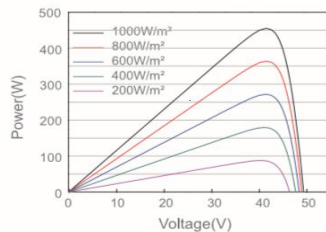
Cell	Mono	
No.of cells	144(6x24)	
Dimensions	2102±2mm x1040±2mm x 35±1mm	
Weight	23.0kgs±3%	
Cable Length	300mm	
Cable Cross Section Size	4mm ² (IEC)	
Junction Box	IP67,3diodes	
Connecto	MC4 Compatible	
Packaging Configuration	31pcs/Pallet,11 pallets. 34pcs/Pallet,11pallets	715pcs/40ft container
Operating Conditions		
Maximum System Voltage	1000/1500V DC	
Operating Temperature	-40°C ~ +85°C	
Maximum Series Fuse	20A	
Maximum Static Load,Front	5400Pa(112lb/ft ²)	
Maximum Static Load,Back	2400Pa(50lb/ft ²)	
Safety Class	Class II	

Characteristics

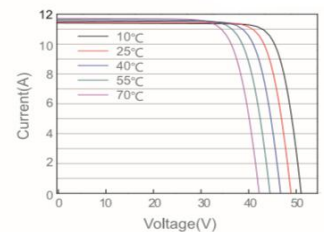
Current-Voltage Curve STM-455/144-S2



Power-Voltage Curve STM-455/144-S2



Current-Voltage Curve STM-455/144-S2



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