

## 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 20.8%) 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.



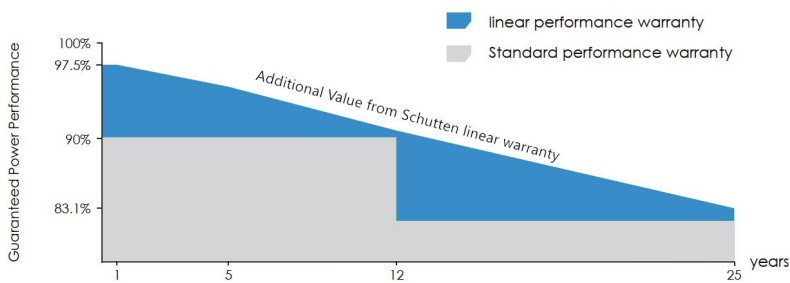
### Severe Weather Resilience

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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Schutten solar

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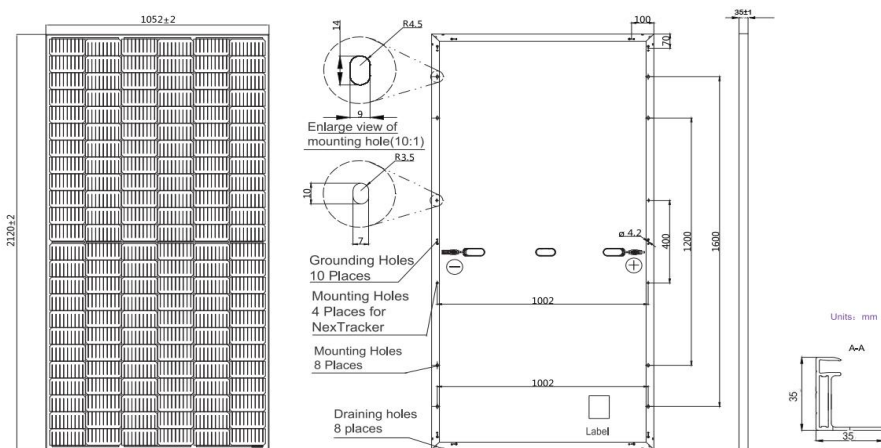
Mail: info@schutten.cn

Website: www.schutten-solar.com

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 (%)	19.70	20.00	20.20	20.40	20.60	20.80
Power Tolerance				0-+5W		
Temperature Coefficient of Isc ( $\alpha$ -Isc)				+0.04%/°C		
Temperature Coefficient of Voc ( $\beta$ -Voc)				-0.272%/°C		
Temperature Coefficient of Pmax ( $\gamma$ -Pmp)				-0.350%/°C		
STC	☀ Irradiance 1000W/m <sup>2</sup>		🌡 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	455	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 <sup>2</sup>		🌡 Cell Temperature 20°C	🌤 AM=1.5	🌬 Wind Speed=1m/s	

### Mechanical Diagrams



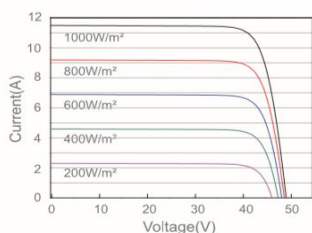
Remark: customized frame color and cable length available upon request

### Specifications

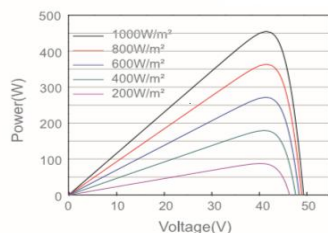
Cell	Mono	
No. of cells	144(6x24)	
Dimensions	2120±2mm x 1052±2mm x 35±1mm	
Weight	25.0kgs±3%	
Cable Length	300mm	
Cable Cross Section Size	4mm <sup>2</sup> (IEC)	
Junction Box	IP67,3diodes	
Connector	MC4	
Packaging Configuration	31pcs/Pallet, 11 pallets. 34pcs/Pallet, 11pallets	715pcs/40ft container
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 <sup>2</sup> )	
Maximum Static Load, Back	2400Pa(50lb/ft <sup>2</sup> )	
Safety Class	Class II	

### Characteristics

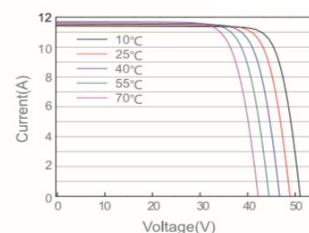
Current-Voltage Curve STM-455/144-S2



Power-Voltage Curve STM-455/144-S2



Current-Voltage Curve STM-455/144-S2



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