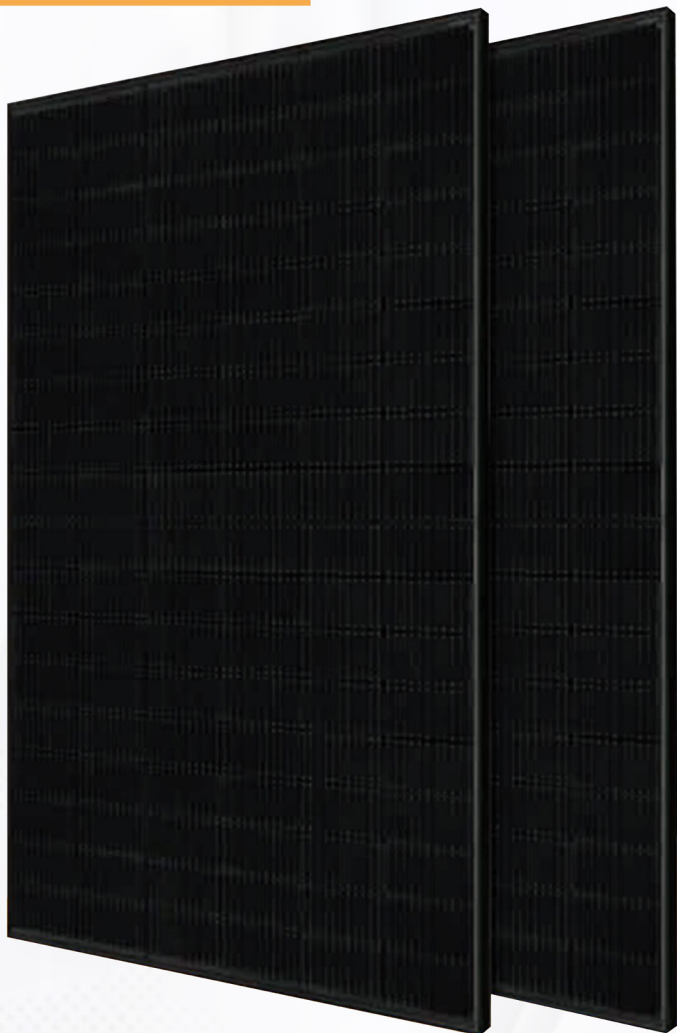


N-TYPE SERIES

WS54M10



425-445W



Superior aesthetics, all-black design



Robust product design for harsh weather conditions



Improved performance in shaded areas



Designed & engineered in the U.S., Made in Dubai

Certifications:



Headquarter address

📍 2401 Fountain view Dr, #464
Houston TX 774057

☎ (832) 291- 3444

✉ info@winnsolarllc.com

Factory address

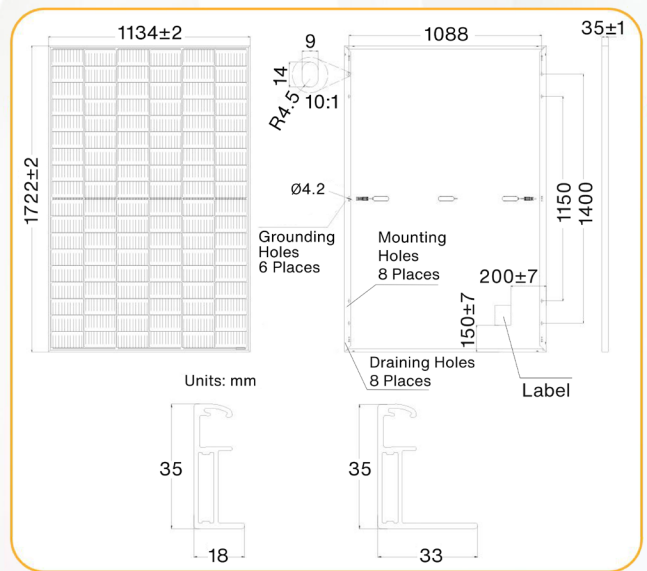
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MECHANICAL SPECIFICATIONS

Cell Type	N type Mono-crystalline 182x91mm
Weight	21.5kg
Dimensions	1722x1134x35mm(LxWxT)
Cables	Portrait 300mm/Landscape 1200mm/Customized
No. of Cells	108 (6x18)
Glass	3.2mm (0.13inches) AR Coating Tempered Glass
Junction Box	IP68, 3/6 Bypass Diodes
Packing	31pcs/pallet, 806pcs/40HQ
Connector Type	QC Solar (Suzhou) Corporation(QC4.10-35) OR Staubli Electrical Connector AG (PV-KST4-EV02/xy_UR)
Frame	Anodized Aluminium Alloy
Cable Cross-Section Size	TUV: 4mm ² (0.006inches ²)/UL: 12AWG



ELECTRICAL SPECIFICATIONS

Module Type	ws-425W-M54HN-M10		ws-430W-M54HN-M10		ws-435W-M54HN-M10		ws-440W-M54HN-M10		ws-445W-M54HN-M10	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Open-circuit Voltage (Voc/V)	38.75	36.81	38.95	37.00	39.16	37.20	39.38	37.41	39.59	37.61
Maximum Power Voltage (Vmp/V)	32.18	29.99	32.38	30.10	32.59	30.33	32.81	30.56	33.02	30.76
Short-circuit Current (Isc/A)	13.66	11.03	13.73	11.09	13.80	11.14	13.86	11.19	13.93	11.25
Maximum Power Current (Imp/A)	13.21	10.67	13.28	10.73	13.35	10.78	13.41	10.83	13.48	10.89
Maximum Power (Pmax/Wp)	425	320	430	323	435	327	440	331	445	335
Module Efficiency STC (%)	21.77%		22.02%		22.28%		22.53%		22.79%	
Power Tolerance (W)	±3%									
Tolerance of rating Pmax/Isc/Voc%	±3%/±4%/±3%									

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

MAXIMUM RATINGS

Maximum System Voltage	1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	25A
Safety Class	II
Static Loading	Snow Loading: 5400Pa/ Wind Loading: 2400Pa
Conductivity at Ground	≤0.1Ω
Resistance	≥100MΩ

TEMPERATURE CHARACTERISTICS

NOCT Temperature	43°C±2°C
Temperature Coefficient (Pmax)	-0.36%/°C
Temperature Coefficient (Voc)	-0.26%/°C
Temperature Coefficient (Isc)	0.043%/°C

PERFORMANCE WARRANTY

Max Power Degradation	0.5%/Year
97.5% At The End of	1 st Year
92.5% At The End of	10 th Year
83.5% At The End of	25 th Year

CURVE & TEMPERATURE DEPENDENCE

