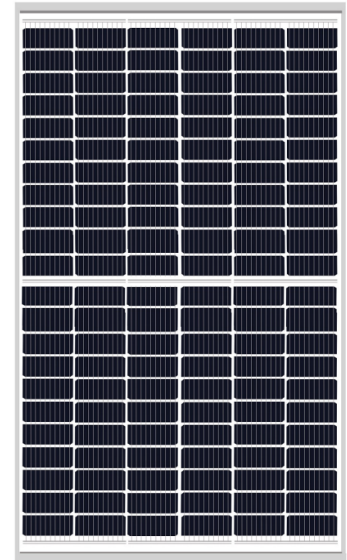
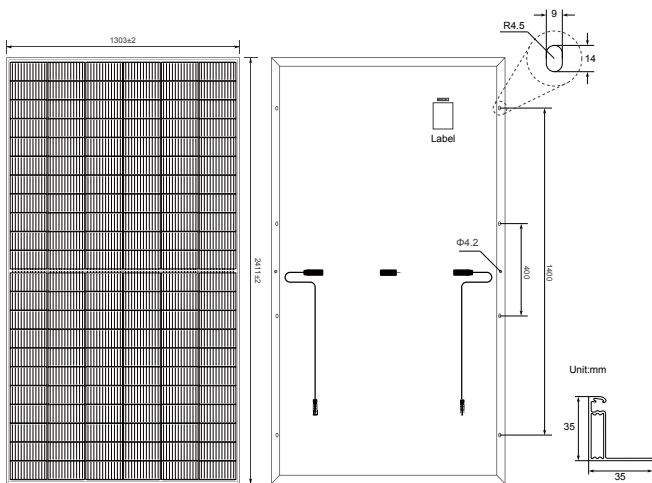


AL640~665M12 640-665Watt

210mm 132Cells PV Solar Module



12 Years
Material & Craft
Quality assurance

12 Years
90% Output
Power guarantee

25 Years
80% Output
Power guarantee

Electrical Characteristics (STC/NOCT)

Module Type	AL640M12		AL645M12		AL650M12		AL655M12		AL660M12		AL665M12	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power- Pmax(W)	640	492	645	496	650	500	655	503	660	507	665	511
Open Circuit Voltage - Voc(V)	45.30	41.82	45.50	42.00	45.68	42.18	45.87	42.35	46.03	42.50	46.31	42.66
Short-Circuit Current - Isc(A)	18.53	15.75	18.58	15.80	18.63	15.84	18.68	15.88	18.73	15.92	18.78	15.97
Voltage at Pmax -Vmp(V)	37.34	34.04	37.52	34.02	37.72	34.39	37.91	34.55	38.08	34.71	38.25	34.87
Current at Pmax - Imp(A)	17.14	14.45	17.19	14.49	17.23	14.52	17.28	14.56	17.33	14.61	17.38	14.66
Module Efficiency -ηm(%)	20.37	/	20.53	/	20.70	/	20.85	/	21.01	/	21.16	/
Power Tolerance(W)	(0, +4.99W)											
Maximum System Voltage(V)	1500Vdc (IEC / UL)											
Maximum Series Fuse Rating (A)	30A											

STC : Irradiance 1000W/m², Cell Temperature 25 C, Air Mass 1.5

NOCT : Irradiance 800W/m², Ambient Temperature 20 C, Air Mass 1.5, Wind Speed 1m/s

Mechanical Specifications

External Dimensions	2411×1303×35mm
Weight	33kg
Solar Cells	Mono crystalline 210mm (2x66pcs)
Front Glass	AR Coated 3.2 mm tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68
Output Cables	4.0mm ² , 30cm (+), 30cm (-), length can be customized
Connector	MC4 Compatible
Mechanical Load	Front Side Max. 5400Pa, Rear Side Max. 2400Pa

Temperature Characteristics

Pmax Temperature Coefficient	-0.362%/ C
Voc Temperature Coefficient	-0.262%/ C
Isc Temperature Coefficient	+0.042%/ C
Operating Temperature	-40 ~ +85 C
Nominal Operating Cell Temperature(NOCT)	45±2 C

Packing Configuration

Container	40'HQ
Pieces per Pallet	31
Pallets per Container	18
Pieces per Container	558

Current-Voltage & Power-Voltage Curves (AL660M12)

