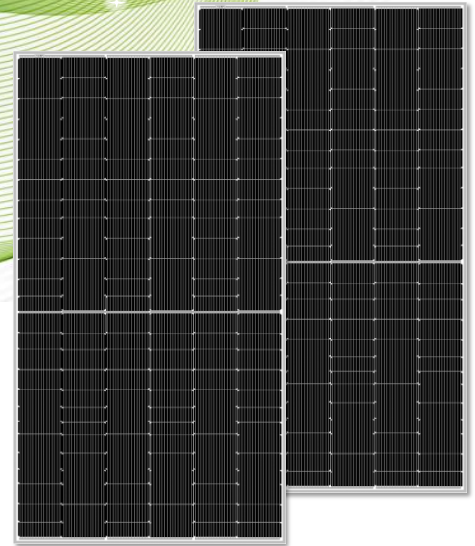





N-Type

156cells (Bifacial)
(610 - 630W)



Those who dream a better future can help lead to a more meaningful and enriched world.

As a leading solar module manufacturer in Korea, we never stop to achieve competitiveness through differentiation, implement the maximum value, and commit to sustainable development with customers.

Certificates



ISO

- ISO 9001:2015
- ISO 14001:2015
- ISO 45001:2018



Test Standard

- IEC 61215
- IEC 61730
- UL 61730



Quality

- Over 50years of manufacturing experience (from 1966)
- Having own official laboratory approved by TUV SUD

Key Features



Linear Performance Warranty

- 12 years product warranty
- 30 years performance warranty



Company Credit

- ICR (Issuer Credit Rating) BBB
- Listed on Korean Index



Mechanical Load

- Front 5,400 Pa (Snow load)
- Back 2,400 Pa (Wind load)



1000V or 1500V

- Designed for UL and IEC 1,500V
- Saving BoS costs

AE-NNEA0 Series

| 610W - 630W TOPcon | Half-Cut 156Cells |

HAxxxAE-NNEA0		HA610AE-NNEA0		HA615AE-NNEA0		HA620AE-NNEA0		HA625AE-NNEA0		HA630AE-NNEA0	
		STC (NOCT)		STC (NOCT)		STC (NOCT)		STC (NOCT)		STC (NOCT)	
Max Power	Pmax(Wp)	610	461	615	464	620	468	625	472	630	475
Voltage at Pmax	Vmp(V)	45.70	43.00	45.90	43.20	46.10	43.40	46.30	43.60	46.50	43.70
Current at Pmax	Imp(A)	13.35	10.71	13.40	10.75	13.45	10.79	13.50	10.83	13.55	10.86
Open Circuit Voltage	Voc(V)	55.10	52.00	55.30	52.20	55.50	52.40	55.70	52.50	55.90	52.70
Short circuit Current	Isc(A)	14.11	11.39	14.16	11.43	14.21	11.47	14.26	11.51	14.31	11.55
Module efficiency	%	21.82%		22.00%		22.18%		22.36%		22.54%	
Temperature Coefficient of Isc		+ 0.046 [%/°C]									
Temperature Coefficient of Voc		- 0.25 [%/°C]									
Temperature Coefficient of Pmax		- 0.30 [%/°C]									
NOCT	°C	44±2 °C									

Electrical Characteristics With 25% Rear Side Power Gain		HA610AE-NNEA0		HA615AE-NNEA0		HA620AE-NNEA0		HA625AE-NNEA0		HA630AE-NNEA0	
Front power	Pmax (Wp)	610		615		620		625		630	
Total power	Pmax (Wp)	763		769		775		781		788	
Voltage at Pmax	Vmp(V)	45.80		46.00		46.20		46.40		46.60	
Current at Pmax	Imp(A)	16.65		16.71		16.77		16.84		16.90	
Open Circuit Voltage	Voc(V)	55.20		55.40		55.60		55.80		56.00	
Short circuit Current	Isc(A)	17.60		17.66		17.72		17.79		17.85	

All data accordance with STC of real side power generation will not guarantee as they may depending on installation location, side, angle and other things.

Mechanical Data	
Dimension	2465 x 1134 x 30 mm
Weight	34.3kg ± 1.0kg
Junction Box	IP68 with bypass diode
Frame	Anodized Aluminum (Silver)
Connector	MC4-Compatible
Glass	2.0mm+2.0mm heat strengthened glass
Cable	(+) 350mm, (-) 350mm, 12AWG

System Design	
Max.System Voltage	1500 VDC
Max.Series Fuse rating	30A
Max.Reverse Current	30A

Operational & Testing Condition	
Operational Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Max.Test Load (Push)	5400 Pa

Packaging	
36 pcs / pallet, 496 pcs / 40'HQ	

