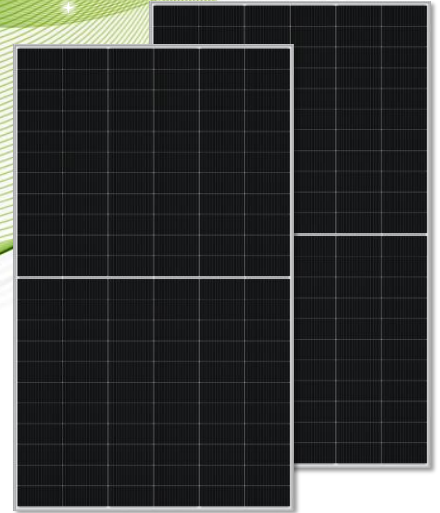




N-Type

# 132cells (Bifacial)

640W - 665W



As a leading provider of integrated energy solutions in Korea, we deliver a wide spectrum of technologies across solar generation, storage, and power management. We are committed to innovation-driven competitiveness, long-term value creation, and sustainable growth with our customers.

## Certificates



### ISO

- ISO 9001:2015
- 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 (88.90%)



### 1500V

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



### Mechanical Load

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

# AC-NDJA0 Series

| 640W - 665W TOPCon | Half-Cut 132Cells |

HAxxxAC-NDJA0		HA640AC-NDJA0		HA645AC-NDJA0		HA650AC-NDJA0		HA655AC-NDJA0		HA660AC-NDJA0		HA665AC-NDJA0	
		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
<b>Max Power</b>	<b>Pmax(Wp)</b>	640	488	645	491	650	495	655	499	660	503	665	507
<b>Voltage at Pmax</b>	<b>Vmp(V)</b>	41.28	38.73	41.42	38.86	41.56	39.00	41.7	39.13	41.84	39.26	41.98	39.39
<b>Current at Pmax</b>	<b>Imp(A)</b>	15.51	12.6	15.58	12.66	15.65	12.72	15.72	12.77	15.79	12.83	15.86	12.89
<b>Open Circuit Voltage</b>	<b>Voc(V)</b>	49.47	47.61	49.60	47.74	49.73	47.86	49.86	47.99	49.99	48.11	50.12	48.24
<b>Short Circuit Current</b>	<b>Isc(A)</b>	16.42	13.24	16.49	13.29	16.56	13.35	16.63	13.40	16.70	13.46	16.77	13.52
<b>Module efficiency</b>	<b>%</b>	23.7		23.9		24.1		24.2		24.4		24.6	
<b>Temperature Coefficient of Isc</b>		+ 0.048 [%/°C]											
<b>Temperature Coefficient of Voc</b>		- 0.25 [%/°C]											
<b>Temperature Coefficient of Pmax</b>		- 0.29 [%/°C]											
<b>NOCT</b>	<b>°C</b>	42±2°C											

Electrical Characteristics With Rear Side Power Gain		HA640AC-NDJA0		HA645AC-NDJA0		HA650AC-NDJA0		HA655AC-NDJA0		HA660AC-NDJA0		HA665AC-NDJA0	
<b>Front power</b>	<b>Pmax(Wp)</b>	640		645		650		655		660		665	
<b>Total power</b>	<b>Pmax(Wp)</b>	707		713		718		724		729		735	
<b>Voltage at Pmax</b>	<b>Vmp(V)</b>	41.33		41.47		41.61		41.75		41.89		42.03	
<b>Current at Pmax</b>	<b>Imp(A)</b>	17.12		17.19		17.27		17.35		17.43		17.50	
<b>Open Circuit Voltage</b>	<b>Voc(V)</b>	49.48		49.61		49.74		49.87		50.00		50.13	
<b>Short Circuit Current</b>	<b>Isc(A)</b>	18.07		18.14		18.22		18.30		18.37		18.45	

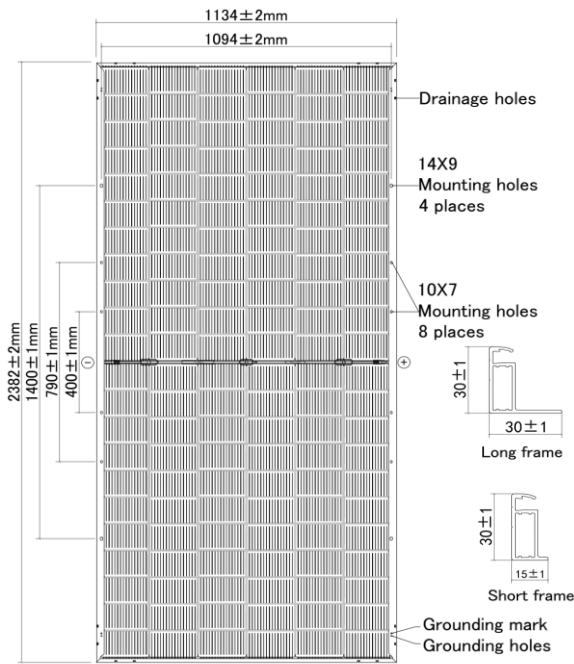
All data accordance with STC of real side power generation will not guarantee as they may depending on installation location, side, angle and other things.  
 NOCT : Irradiance on cell surface 800 W/m<sup>2</sup>, Air Temperature 20°C, Wind Velocity 1m/s, Mounting open back side.

Mechanical Data	
<b>Dimension</b>	2382 x 1134 x 30 mm
<b>Weight</b>	32.3kg
<b>Junction Box</b>	3 Diodes, IP68 according to IEC 62790
<b>Frame</b>	Anodized aluminium alloy
<b>Connector</b>	PV-ZH202B or MC4-EVO 2A
<b>Glass</b>	Front, 2.0mm, ARC,Heat strengthened glass Back, 2.0mm, Heat strengthened glass
<b>Cable</b>	4 mm <sup>2</sup> /Portrait: 300 mm (+) /200 mm (-) Landscape: 1400mm(+)/1400mm(-) Length can be customized

System Design	
<b>Max.System Voltage</b>	1500 DC (IEC)
<b>Max.Series Fuse rating</b>	30A
<b>Max.Reverse Current</b>	30A

Operational & Testing Condition	
<b>Operational Temperature</b>	-40°C ~ 85°C
<b>Max.Test Load (Push)</b>	Front 5400 Pa / Back 2400 Pa

Packaging	
36 pcs / pallet, 720 pcs / 40'HQ	



Back side (mm)

