

SPECIFICATIONS

Cells per Unit	6
Voltage per Unit	12
Capacity	200Ah@20hr-rate to 1.75V per cell@25°C
Weight	Approx. 54.0 Kg(Tolerance ± 3%)
Internal Resistance	Approx. ≤4.2 mΩ
Terminal	F12/M8
Max. Discharge Current	1800A (5sec)
Design Life	12 years(floating charge)
Max. Charging Current	54A
Reference Capacity	C3 145.6AH C5 173.0AH C10 189.4AH C20 200.0AH
Float Charging Voltage	13.6V ≈ 13.8V @25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6V ≈ 14.8V @25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C ≈ 60°C Charge: 0°C ≈ 50°C Storage: -20°C ≈ 60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self - discharge ratio is less than 3% at 25°C. Please charge batteries before using
Container Material	A.B.S. UL94-HB, UL94-V0 Optional

LDC Lead Deep Cycle
AGM DEEP CYCLE SERIES



LDC series is specially designed for frequent discharge deep cycle application. By using the specially designed active material, strong grids and thick plate construction, the LDC series battery offers reliable performance in high load situations and could provide competitive cycle performance. It is suitable for Electric Vehicles and Golf Carts, Floor Machines, Forklifts, Aerial lifts, Robotics, Marine, RV, Mobility and Medical Equipment, and most outdoor application.

DIMENSIONS

Length	530mm
Width	209mm
Height	214mm
Total Height	231mm
Terminal	Value
M5	6-7 N°m
M6	8-10 N°m
M8	10-12 N°m

CONSTANT CURRENT DISCHARGE CHARACTERISTICS A(25°C)

F.V/Time	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	8Hr	10Hr	20Hr
1.60V	315.6	194.1	109.3	65.11	50.71	39.78	33.84	21.7	18.0	9.33
1.65V	295.1	183.8	105.6	62.92	49.15	38.59	32.77	21.53	17.83	9.28
1.70V	277.6	174.3	102.2	61.25	47.08	37.4	31.89	21.19	17.49	9.16
1.75V	260.0	167.4	99.0	58.9	45.87	36.38	31.0	20.85	17.31	9.0
1.80V	238.1	161.2	94.6	56.88	45.0	35.53	30.6	20.51	17.14	8.91
1.85V	197.0	136.7	84.45	52.02	41.88	33.32	28.17	19.31	16.11	8.83

CONSTANT POWER DISCHARGE CHARACTERISTICS WPC(25°C)

F.V/Time	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	8Hr	10Hr	20Hr
1.60V	550.5	352.6	205.2	123.1	96.3	76.67	64.05	42.3	35.3	18.62
1.65V	535.3	344.4	201.7	119.8	93.9	74.8	62.32	41.96	34.96	18.46
1.70V	506.7	327.8	195.8	116.8	90.3	72.42	60.76	41.45	34.28	18.29
1.75V	478.2	316.3	190.4	112.6	88.07	70.72	59.38	40.77	33.94	17.96
1.80V	442.1	306.1	182.6	110.1	87.58	69.36	58.58	40.1	33.6	17.79
1.85V	371.4	262.5	164.0	101.3	81.69	65.28	54.18	37.9	31.74	17.63

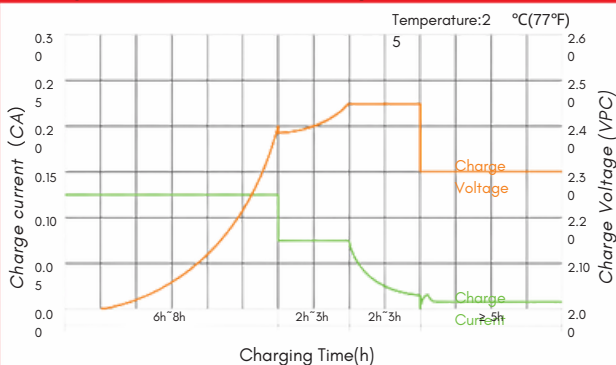
(Note)The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C20 should reach 95% after the first cycle and 100% after the third cycle.



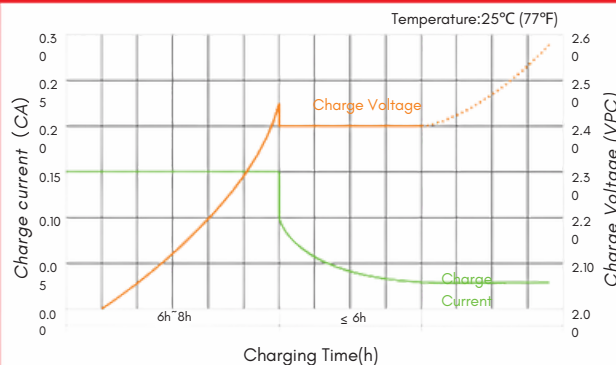


AGM DEEP CYCLE SERIES LDC

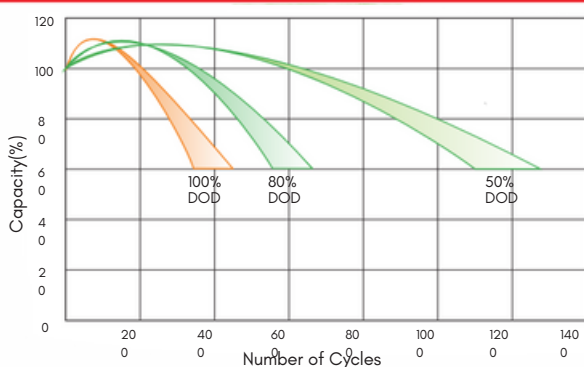
Charge Characteristic Curve for Cycle Use(IIUU)



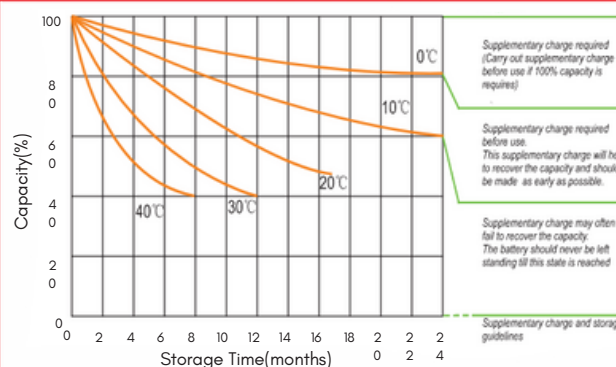
Charge Characteristic Curve For Cycle Use(IUI)



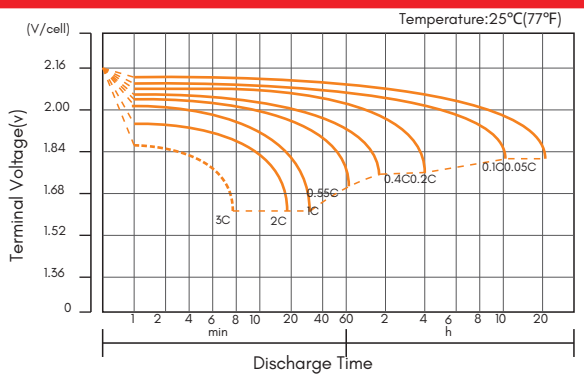
Cycle Life in Relation to Depth of Discharge



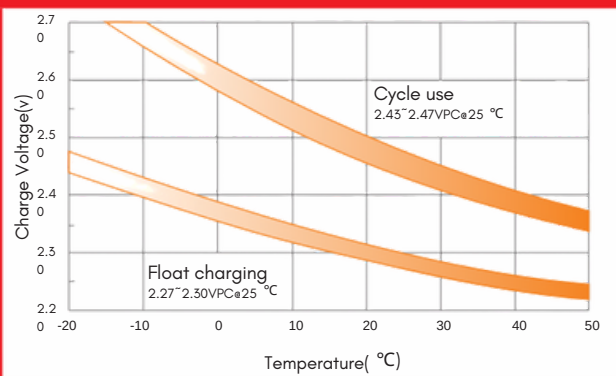
Storage Characteristics



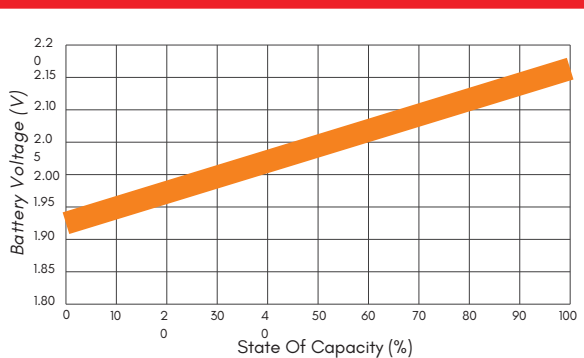
Discharge Characteristics Curve



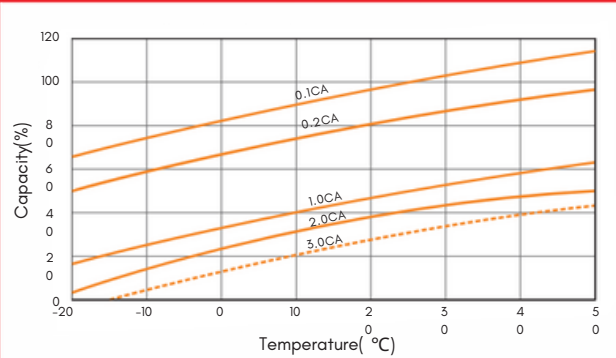
Relationship Between charging Voltage and Temperature



Relationship of OCV And State of Charge (20 °C)



Temperature Effects on Capacity



(Note) All of the above information could be changed without prior notice. IBS Italia reserves the right to explain and update the latest information.

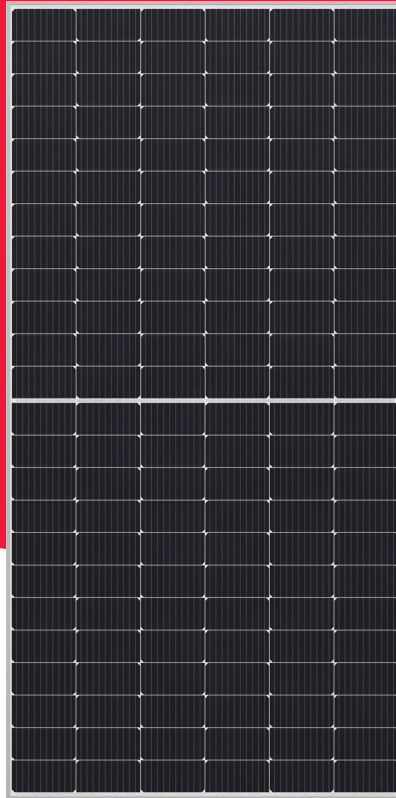


NU-JD Series



NU-JD545 / 550


545 / 550 W



The Project Solution




Powerful product features

- +%** Guaranteed positive power tolerance (0/+5 %)
-  Module efficiency 21.1 / 21.3 %
PERC monocrystalline silicon photovoltaic modules
-  Max. system voltage 1,500 V
Lower BOS costs by longer strings

- MBB** MBB busbar technology
Improved reliability
Higher efficiency
Reduced series resistance
-  Half-cut cell
Improved shading performance
Lower internal losses
Reduced hot spot risk

-  Tested and certified
VDE, IEC/EN61215, IEC/EN61730
Safety class II, CE
Fire rating class C
-  Robust product design
PID resistance test passed
Salt mist test passed (IEC61701)
Ammonia test passed (IEC62716)
Dust and sand test passed (IEC60068)

Your solar partner for life

- 60 YEARS** 60 years of solar expertise
- 25 YEARS** Linear power output guarantee
- 10* YEARS** Product guarantee
-  Local support team in Europe
- 50 MIL** 50 million PV modules installed
- 1 TIER** Tier 1 - BloombergNEF



SHARP
Be Original.

* Applicable for modules installed in countries as shown in the guarantee conditions.

Electrical data (STC)

		NU-JD545	NU-JD550	
Maximum power	P_{max}	545	550	W_p
Open-circuit voltage	V_{oc}	50.54	50.70	V
Short-circuit current	I_{sc}	13.73	13.81	A
Voltage at point of maximum power	V_{mpp}	41.83	42.02	V
Current at point of maximum power	I_{mpp}	13.03	13.09	A
Module efficiency	η_m	21.1	21.3	%

STC = Standard Test Conditions: irradiance 1,000 W/m², AM 1.5, cell temperature 25 °C.
 Rated electrical characteristics are within ±10 % of the indicated values of I_{sc} , V_{oc} and 0 to +5 % of P_{max} .
 Reduction of efficiency from an irradiance change of 1,000 W/m² to 200 W/m² ($T_{module} = 25$ °C) is less than 3 %.

Electrical data (NMOT)

		NU-JD545	NU-JD550	
Maximum power	P_{max}	408.72	412.46	W_p
Open-circuit voltage	V_{oc}	47.90	48.05	V
Short-circuit current	I_{sc}	11.13	11.20	A
Voltage at point of maximum power	V_{mpp}	39.00	39.17	V
Current at point of maximum power	I_{mpp}	10.48	10.53	A

NMOT = Nominal Module Operating Temperature: 42.5 °C, irradiance 800 W/m², air temperature of 20 °C, wind speed of 1 m/s.

Mechanical data

Length	2,278 mm
Width	1,134 mm
Depth	35 mm
Weight	27.5 kg

Temperature coefficient

P_{max}	-0.341 %/°C
V_{oc}	-0.262 %/°C
I_{sc}	0.054 %/°C

Limit values

Maximum system voltage	1,500 V DC
Over-current protection	25 A
Temperature range	-40 to 85 °C
Max. mechanical load (snow/wind)	2,400 Pa
Tested snow load (IEC61215 test pass*)	5,400 Pa

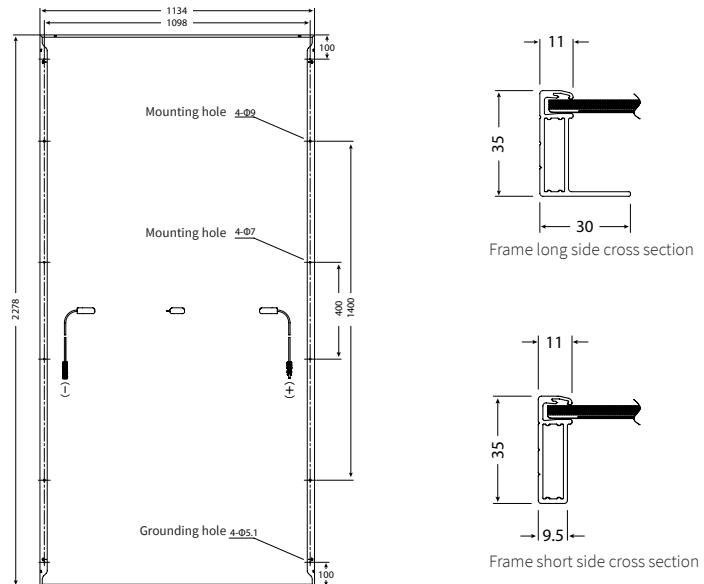
Packaging data**

Modules per pallet	31 pcs
Pallet size (L × W × H)	2.31 m × 1.13 m × 1.25 m
Pallet weight	Approx. 945 kg

**Special offloading requirements, please refer to QR code or: www.sharp.eu/NUJD-offloading



Dimensions (mm)



*Please refer to SHARP's installation manual for details.

General data

Cells	Half-cut cell mono, 182 mm x 91 mm, MBB, 2 strings of 72 cells in series
Front glass	Anti-reflective high transmissive low iron tempered glass, 3.2 mm
Backsheet	White
Frame	Anodized aluminium alloy, silver
Cable	Ø 4.0 mm ² , length 1,750 mm [or on request (+) 397 mm, (-) 50 mm]
Connection box	IP68 rating, 3 bypass diodes
Connector	C1, IP68

Note: Technical data is subject to change without prior notice. Before using SHARP products, please request the latest data sheets from SHARP. SHARP accepts no responsibility for damage to devices which have been equipped with SHARP products on the basis of unverified information. The specifications may deviate slightly and are not guaranteed. Installation and operating instructions are to be found in the corresponding handbooks, or can be downloaded from www.sharp.eu. This module should not be directly connected to a load.

Axpert VM II Off-Grid Inverter

Operation without battery



- Pure sine wave solar inverter
- Output power factor 1
- High PV input voltage range
- Battery independent design
- Built-in 80A and 100A MPPT solar charger for 1.2K/2.5K/3K Premium and 3K/5K respectively
- Battery equalization function to optimize battery performance and extend lifecycle
- Built-in anti-dust kit for harsh environment (only for 3K/5K models)

Axpert VM II Off-Grid Inverter Selection Guide

MODEL	Axpert VM II 1200-12	Axpert VM II 2500-24	Axpert VM II Plus 3000-24	Axpert VM II 3000-24	Axpert VM II 5000-48
RATED POWER	1200VA/1200W	2500VA/2500W	3000VA/3000W	3000VA / 3000W	5000VA / 5000W
INPUT					
Voltage	230 VAC				
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)				
Frequency Range	50 Hz/60 Hz (Auto sensing)				
OUTPUT					
AC Voltage Regulation (Batt. Mode)	230VAC \pm 5%				
Surge Power	2400VA	5000VA	6000VA	6000VA	10000VA
Efficiency (Peak)	93%				
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)				
Waveform	Pure sine wave				
BATTERY					
Battery Voltage	12 VDC	24 VDC	24 VDC	24 VDC	48 VDC
Floating Charge Voltage	13.5 VDC	27 VDC	27 VDC	27 VDC	54 VDC
Overcharge Protection	16 VDC	32 VDC	32 VDC	33 VDC	63 VDC
SOLAR CHARGER & AC CHARGER					
Maximum PV Array Open Circuit Voltage	350 VDC	450 VDC	450 VDC	500 VDC	500 VDC
Maximum PV Array Power	2000W	3000W	3000W	4000 W	5000 W
MPP Range @ Operating Voltage	60-300 VDC	60-400 VDC	60-400 VDC	120~450 VDC	120~450 VDC
Maximum Solar Charge Current	80 A		80A	100 A	100 A
Maximum AC Charge Current	80 A		80A	100 A	100 A
Maximum Charge Current	80 A		80A	100 A	100 A
PHYSICAL					
Dimension, D x W x H (mm)	90 x 288 x 357		100 x 288 x 390	100 x 300 x 440	
Net Weight (kgs)	6.5	7.1	8.0	9	10
Communication Interface	RS232		RS232	USB/RS232 (optional USB/Dry contact)	
ENVIRONMENT					
Humidity	5% to 95% Relative Humidity (Non-condensing)				
Operating Temperature	-10°C to 50°C				
Storage Temperature	-15°C to 60°C				

Product specifications are subject to change without further notice.