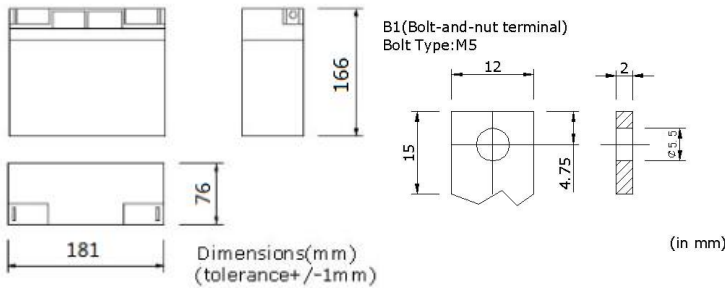


PHYSICAL SPECIFICATION



Nominal Voltage		12V
Nominal Capacity (20HR)		17Ah
Dimension	Length	181±1mm (7.13 inches)
	Width	76±1mm (2.99 inches)
	Container Height	166±1mm (6.54 inches)
	Total Height	166±1mm (6.54 inches)
Weight		Approx. 5.1Kg ±3% (11.24lbs)
Standard Terminal		Bolt & nuts terminal Bolt Type:M5



Shimastu NPC series Deep Cycle Batteries are deep-cycle battery designed to be regularly deeply discharged using most of its capacity, its the most common battery used for solar off-grid and hybrid energy storage, as well as many other applications.

Features:

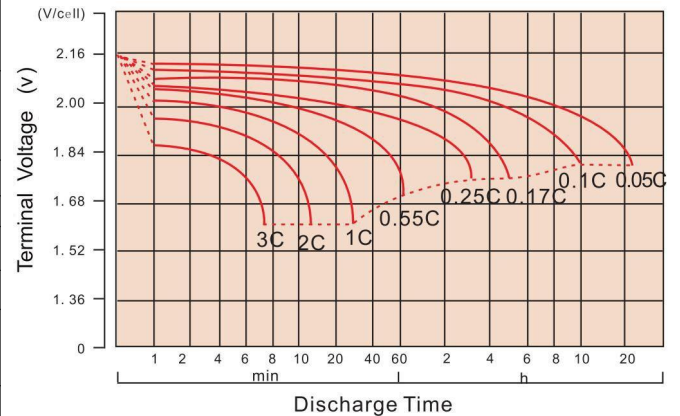
1. Wide protected operation temperature ranges of -20°C (-4°F) to 50°C (122°F).
2. Monthly self-discharge rate below 2% at 25°C (77°F).
3. The battery has perfect performance in maintenance-free, after 12 months, its storage still can reach to 65%, which is high cost-effective solutions for solar, wind power systems and other renewable energy systems
4. Special polar plate design, which ensures a long cycle life up to 8 years in floating service.

ELECTRICAL SPECIFICATION

Characteristics

Capacity	20 hour rate	(0.85A)	17 Ah
	10 hour rate	(1.59A)	15.9Ah
	5 hour rate	(2.89A)	14.5Ah
	3 hour rate	(4.25A)	12.8Ah
	1 hour rate	(9.35A)	9.4Ah
Capacity affected by temperature	40°C (104 °F)		102%
	25°C (77 °F)		100%
	0°C (32 °F)		85%
Max Discharge Current	170A(5 Sec)		
Short Circuit Current	750A		
Internal Resistance	Full charged battery (25°C, 77 °F) 15mΩ		
Designed life	≥650 Cycles @ 50% D.O.D(25°C)		
Constant Voltage Charge	Cycle	Initial Charging Current less than 5.1A Voltage 14.4~15.0V at 25°C (77 °F) Temperature Coefficient -30mV/°C	
	Standby	No limit on Initial Charging Current Voltage 13.5~13.8V at 25°C (77 °F) Temperature Coefficient -20mV/°C	

Discharge curves @ 25°C (77 °F)



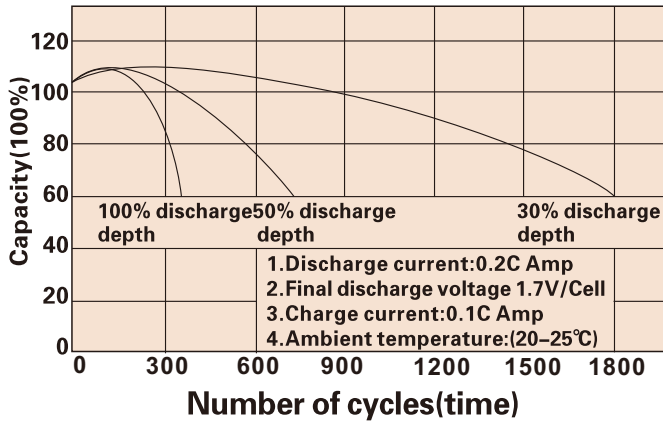
CONSTANT CURRENT DISCHARGE RATING A@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	62.57	44.67	32.62	18.74	10.39	4.794	3.206	1.676	0.885
1.65V	58.18	42.22	31.19	17.99	10.03	4.646	3.123	1.656	0.871
1.70V	52.49	38.86	29.21	17.20	9.699	4.520	3.042	1.631	0.860
1.75V	47.03	35.58	27.18	16.43	9.349	4.385	2.966	1.609	0.850
1.80V	41.29	32.21	25.10	15.71	8.992	4.249	2.889	1.589	0.842

CONSTANT POWER DISCHARGE RATING WATT PER CELL@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	103.7	75.93	57.04	34.03	19.52	9.156	6.181	3.295	1.743
1.65V	97.56	73.14	55.34	33.02	18.96	8.911	6.044	3.259	1.718
1.70V	90.02	68.57	52.60	31.88	18.45	8.708	5.907	3.215	1.699
1.75V	82.45	63.89	49.66	30.78	17.89	8.484	5.778	3.176	1.680
1.80V	73.94	58.85	46.50	29.71	17.30	8.254	5.649	3.139	1.666

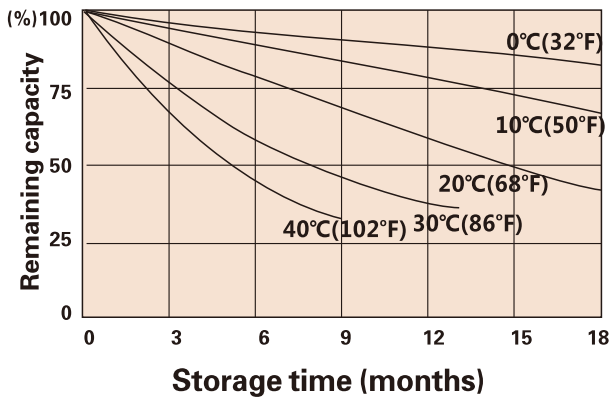
Cycle service life



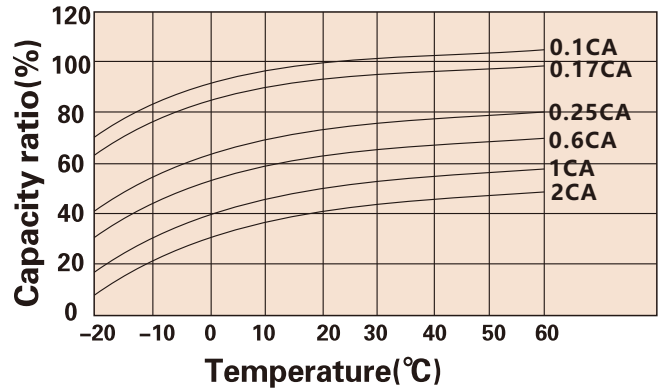
Trickle(or float) service life



Storage time(months)



Temperature and discharge capacity



Charging characteristic



Storage Temperature	Supplementary Charge Interval	Charge Method
≤ 20°C	Every 12 months	Less or 24 hours with a constant voltage of 2.3V/cell
20-30°C	Every 8 months	12-18 hours with a constant voltage of 2.45V/cell
≥ 30°C	Storage to be avoided	8-12 hours with a constant current of 0.05CA

APPLICATIONS

Standby Usage:

- UPS
- Emergency Lights
- Alarm Systems
- Telecommunication Systems

Cyclic Usage:

- Medical Equipments
- Electric Instruments
- Toys
- Camcorder and Solar Systems

Motive Usage:

- Golf Cars
- Wheelchairs
- Lawnmowers
- Motorcycle

(Note) All above information shall be changed without prior notice, Shimastu reserves the right to explain and update the latest information.