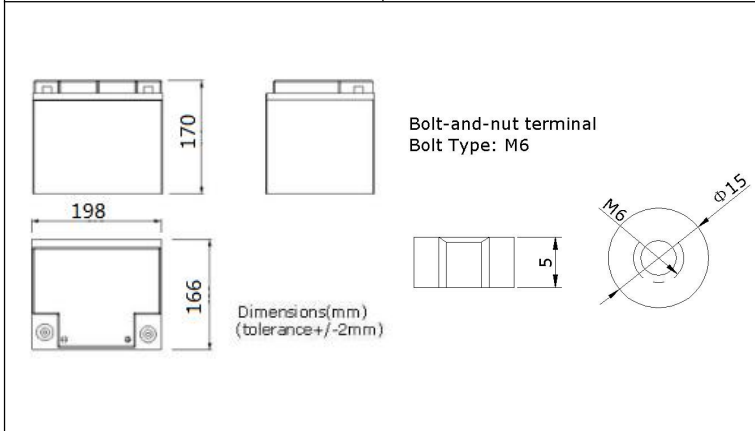


PHYSICAL SPECIFICATION

Nominal Voltage		12V
Nominal Capacity (10HR)		40Ah
Dimension	Length	198±2mm (7.80 inches)
	Width	166±2mm (6.54 inches)
	Container Height	170±2mm (6.69 inches)
	Total Height	170±2mm (6.69 inches)
Weight		Approx. 14.2 Kg ±3% (31.3lbs)
Standard Terminal		B3(Bolt-and-nut 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:

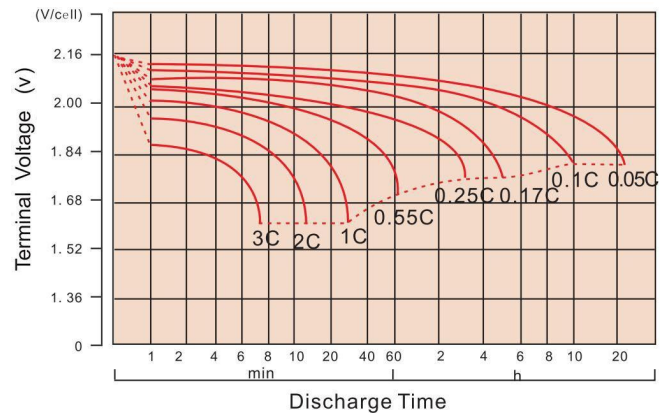
1. Wide protected operation temperature ranges of -20°C (-4°F) to 50°C (122°F).
2. Monthly self-discharge rate below 2% at 25°C (77°F).
3. The battery has perfect performance in maintenance-free, after 12 months, its storage still can reach to 65%, which is high cost-effective solutions for solar, wind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

ELECTRICAL SPECIFICATION

Characteristics

Capacity	10 hour rate (4A)	40Ah
	5 hour rate (6.8A)	34Ah
	3 hour rate (10A)	30Ah
	1 hour rate (22A)	22Ah
Capacity affected by temperature	40°C (104 °F)	102%
	25°C (77 °F)	100%
	0°C (32 °F)	85%
Max Discharge Current	400A(5 Sec)	
Short Circuit Current	920A	
Internal Resistance	Full charged battery (25°C, 77 °F) 9.8mΩ	
Designed life	≥700 Cycles @ 50% D.O.D (25°C)	
Constant Voltage Charge	Cycle	Initial Charging Current less than 10A Voltage 14.1~14.4V 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)



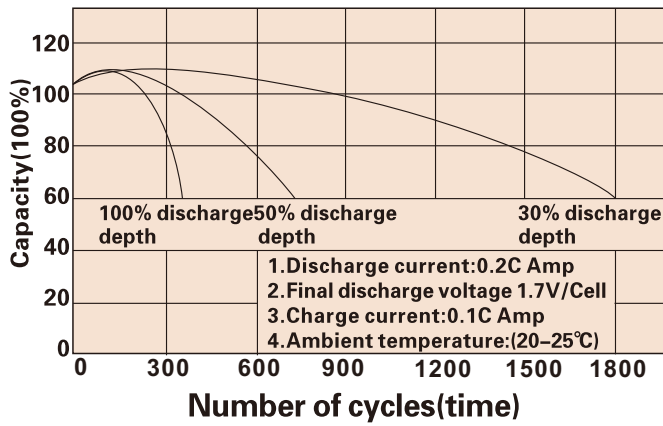
CONSTANT CURRENT DISCHARGE RATING A@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	141.7	100.2	72.39	43.24	24.80	11.32	7.58	4.24	2.20
1.65V	131.8	94.64	69.22	41.58	23.86	10.97	7.37	4.18	2.18
1.70V	118.9	87.14	64.82	39.79	22.96	10.67	7.18	4.10	2.15
1.75V	106.5	79.75	60.34	37.89	22.00	10.34	6.99	4.05	2.12
1.80V	93.54	72.20	55.70	36.23	21.21	10.00	6.80	4.00	2.10

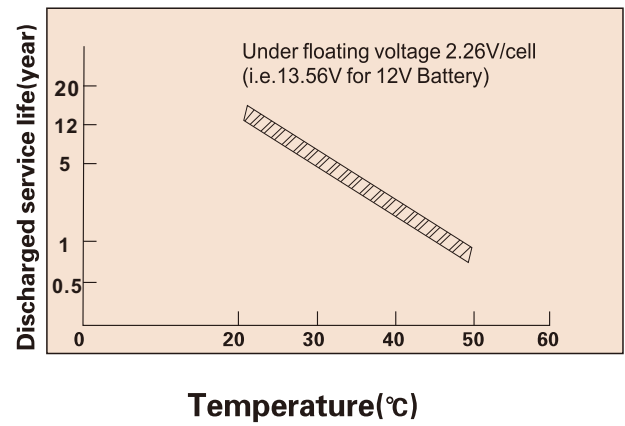
CONSTANT POWER DISCHARGE RATING WATT PER CELL@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	234.9	170.2	126.5	78.56	46.63	21.59	14.63	8.35	4.30
1.65V	221.0	164.0	122.8	76.33	45.11	21.04	14.25	8.20	4.27
1.70V	203.9	153.8	116.7	73.77	43.66	20.53	13.92	8.07	4.23
1.75V	186.8	143.2	110.2	70.98	42.09	20.03	13.62	8.00	4.18
1.80V	167.5	131.9	103.2	68.55	40.79	19.42	13.29	7.87	4.16

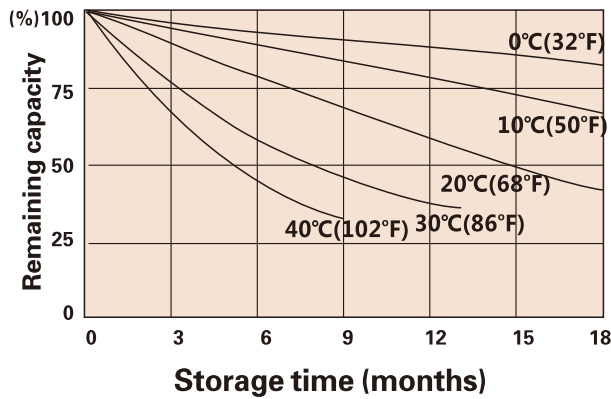
Cycle service life



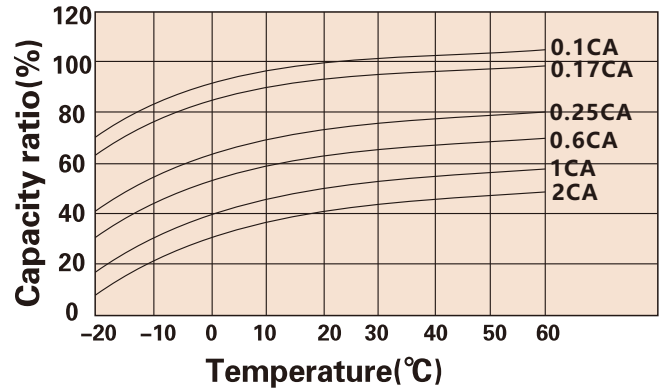
Trickle(or float) service life



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.