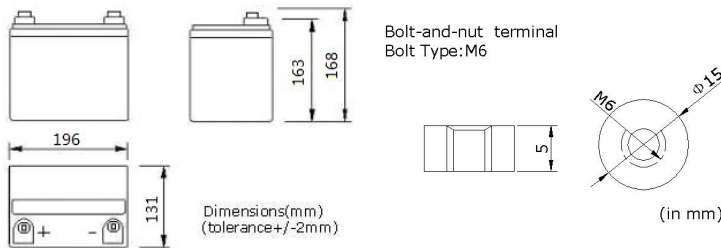


## PHYSICAL SPECIFICATION

Nominal Voltage		12V
Nominal Capacity (10HR)		33Ah
Dimension	Length	196±2mm (7.72 inches)
	Width	131±2mm (5.16 inches)
	Container Height	163±2mm (6.42 inches)
	Total Height	168±2mm (6.61 inches)
Weight		Approx. 11 Kg ±3% (24.25lbs)
Standard Terminal		Bolt-and-nut terminal Bolt Type: M6



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

### Features:

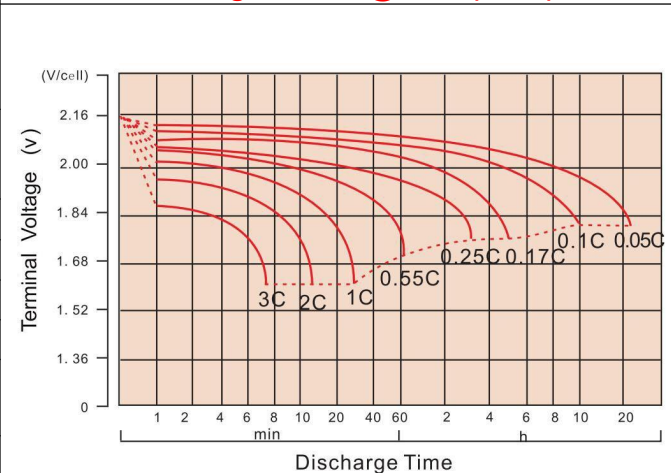
1. Wide protected operation temperature ranges of -20°C (-4°F) to 50°C (122°F).
2. Monthly self-discharge rate below 2% at 25°C (77°F).
3. The battery has perfect performance in maintenance-free, after 12 months, its storage still can reach to 65%, which is high cost-effective solutions for solar, wind 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

### Discharge curves @ 25°C (77 °F)

Capacity	10 hour rate (3.3A)	33Ah
	5 hour rate (5.61A)	28Ah
	3 hour rate (8.25A)	24.8Ah
	1 hour rate (18.2A)	18.2Ah
Capacity affected by temperature	40°C (104 °F)	102%
	25°C (77 °F)	100%
	0°C (32 °F)	85%
Max Discharge Current	330A(5 Sec)	
Short Circuit Current	825A	
Internal Resistance	Full charged battery (25°C, 77 °F) 10mΩ	
Designed life	≥700 Cycles @ 50% D.O.D(25°C)	
Constant Voltage Charge	Cycle	Initial Charging Current less than 8.2A 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



### CONSTANT CURRENT DISCHARGE RATING A@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	119.3	84.32	60.94	36.40	20.50	9.34	6.25	3.50	1.82
1.65V	110.9	79.67	58.27	35.00	19.70	9.05	6.08	3.45	1.80
1.70V	100.1	73.36	54.57	33.50	19.00	8.80	5.92	3.38	1.77
1.75V	89.68	67.14	50.79	31.90	18.20	8.53	5.77	3.34	1.75
1.80V	78.75	60.78	46.89	30.50	17.50	8.25	5.61	3.30	1.73

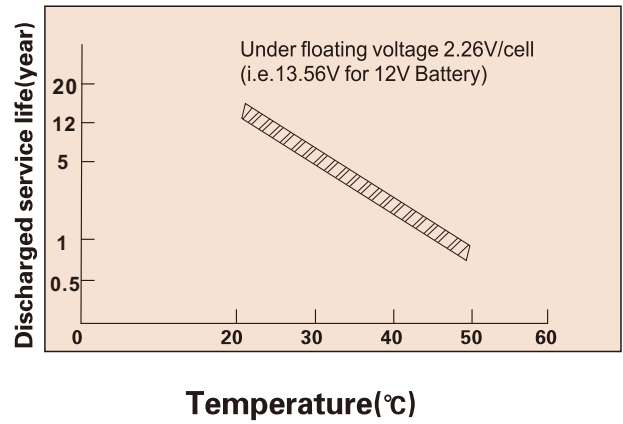
### CONSTANT POWER DISCHARGE RATING WATT PER CELL@25°C

F.V/TIME	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	197.8	143.3	106.5	66.13	38.55	17.81	12.07	6.89	3.55
1.65V	186.0	138.0	103.4	64.25	37.24	17.36	11.75	6.76	3.52
1.70V	171.7	129.5	98.3	62.11	36.13	16.94	11.48	6.66	3.49
1.75V	157.2	120.6	92.78	59.75	34.82	16.53	11.23	6.60	3.45
1.80V	141.0	111.1	86.86	57.71	33.65	16.02	10.97	6.49	3.43

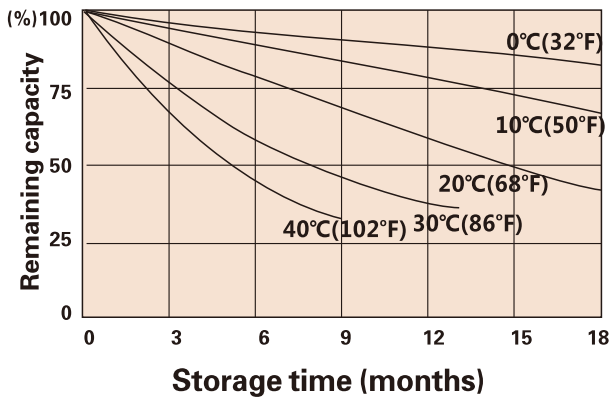
### Cycle service life



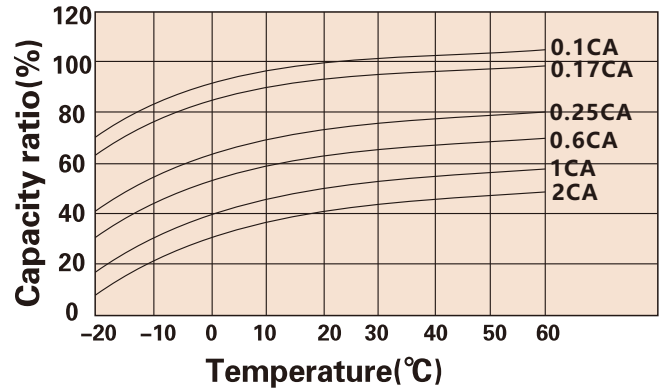
### Trickle (or float) service life



### 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.