

DEEP CYCLE LONG LIFE BATTERY

Battery Specification

Normal Voltage	12V
Number of cell	6
Design life	10 years

Nominal Capacity 77°F (25°C)

20 hour rate (2.00A, 10.5V)	40.0Ah
10 hour rate (3.66A, 10.5V)	36.6Ah
5 hour rate (6.7A, 10.5V)	33.5Ah
1 hour rate (25.3A, 9.6V)	25.3Ah

Internal Resistance

Fully Charged battery 77°F(25°C) ≤9.5mOhms

Self-Discharge

3% of capacity declined per month at 20°C (average)

Operating Temperature Range

Discharge	-20 ~ 60°C
Charge	-10 ~ 60°C
Storage	-20 ~ 60°C

Max. Discharge Current 77°F(25°C) 400(5s)

Short Circuit Current 900A

Charge Methods: Constant Voltage Charge
77°F (25°C)

Cycle use 2.40-2.45VPC

Maximum charging current 13.5A

Temperature compensation -30mV/°C

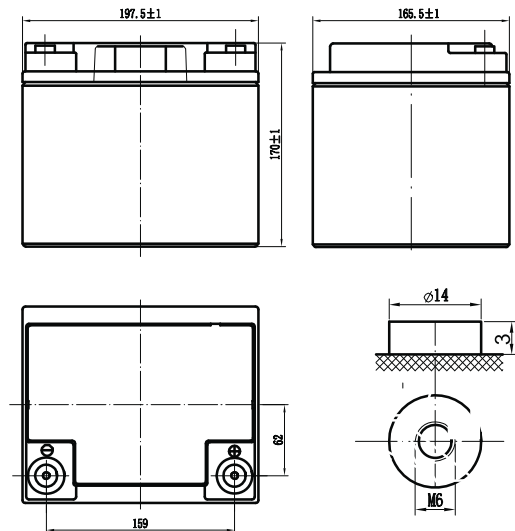
Standby use 13.6-13.8V

Temperature compensation -20mV/°C

Dimensions and Weight

Length (mm / inch)	197.5 / 7.78
Width (mm / inch)	165.5 / 6.52
Height (mm / inch)	170 / 6.69
Total Height (mm / inch)	170 / 6.69
Approx. Weight(Kg / lbs)	12.5 / 275

*Weight deviation: ± 3%



Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper / Plug	Fiberglass	Sulfuric acid

Discharge Constant Current (Amperes at 77°F25°C)

End Point	Volts/Cell	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	89.4	71.2	41.0	35.5	10.6	7.32	4.14	2.08	
1.65V	85.0	66.9	39.7	35.2	10.3	7.20	4.08	2.06	
1.70V	80.5	64.8	38.0	24.8	10.1	7.07	4.02	2.04	
1.75V	76.1	63.0	37.1	24.5	9.85	6.97	3.95	2.02	
1.80V	69.1	57.0	35.4	23.4	9.62	6.77	3.88	2.00	

Discharge Constant Power (Watts at 77°F25°C)

End Point	Volts/Cell	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	170	137	90.6	68.6	54.8	30.8	22.8	14.9	
1.65V	157	124	80.9	62.5	50.4	29.7	21.5	14.0	
1.70V	149	120	78.3	59.3	49.6	27.9	20.7	13.8	
1.75V	142	117	75.8	58.1	48.8	27.4	20.4	13.6	
1.80V	135	113	73.2	56.9	47.9	26.9	20.0	13.5	

(Note) The above characteristics data are average values obtained within threecharge / discharge cycles. All data shall be changed without notice, Starx Security reserves the right to explain and update the information.

General Features

Deep-cycle batteries typically feature thick plates and high-density active material.

The thick battery plates allows more energy storing within the battery plates and releasing during slow discharge.

The high-density active material remains within the batteries' plate/grid structure longer, resisting the normal degradation found in cycling conditions.

Battery are typically used where the battery is discharged to great extent and then recharged.

Deep Cycle refers to applications that typically discharge 60 to 70% or more of the battery capacity.

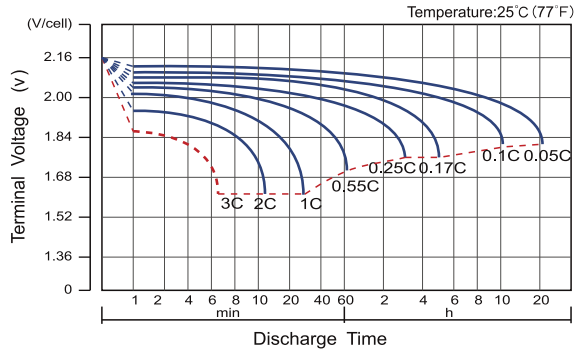
Superior Deep Cycle Design.

Thick plates and high-density active material.

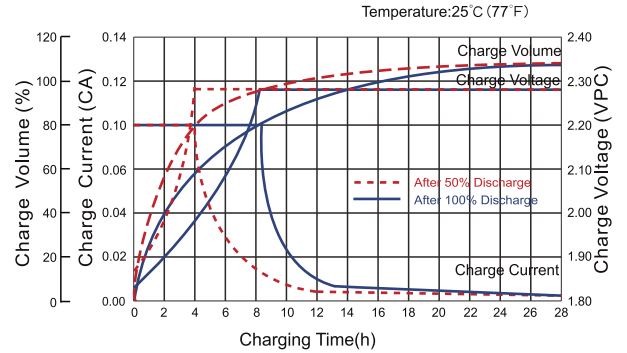
Longer life in deep cycle applications.

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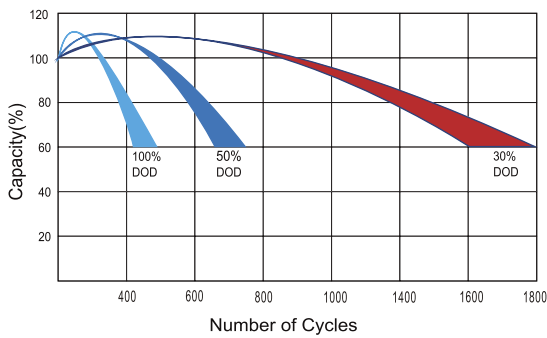
Discharge Characteristics Curve



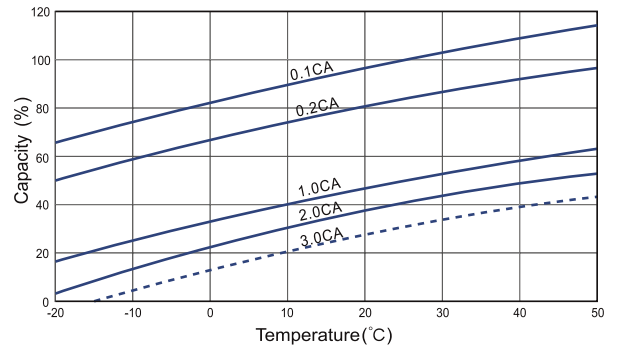
Charge Characteristic Curve For Standby Use



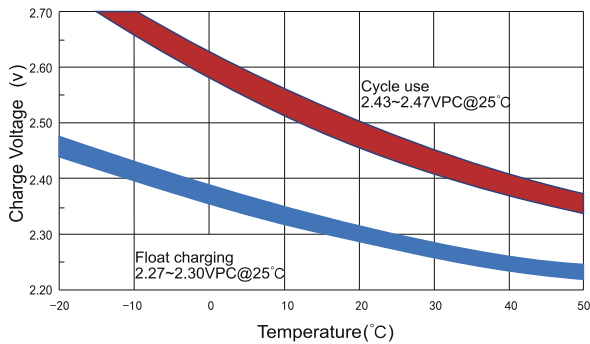
Cycle Life In Relation To Depth Of Discharge



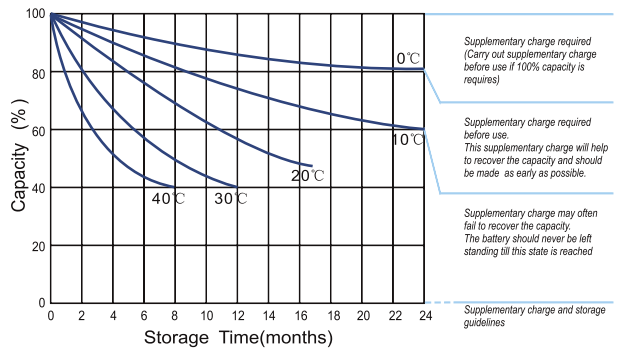
Temperature Effects On Capacity



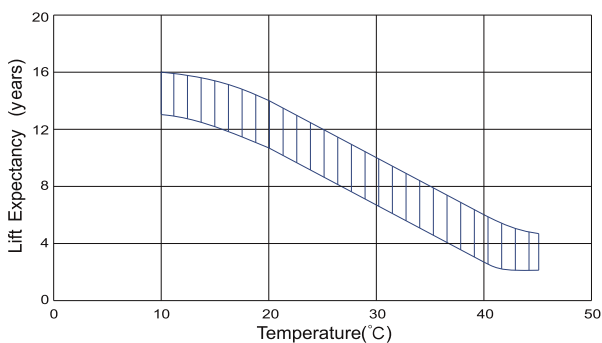
Relationship Between Charging Voltage And Temperature



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

