



Applications

- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply

Remarks:

- Use in normal climate environment with standard range of regulated powered electricity.
- Falling, hitting, bending, etc. may cause degradation of battery characteristics.

Specifications

Nominal Voltage	12V	
Nominal Capacity	33Ah	
Dimensions	Length	194±2mm
	Width	132±2mm
	Height	170±2mm
	Total Height	174±2mm
Approx. Weight	9.9kg±3%	
Terminal Type	T1	
Capacity (25°C)	20HR Rate (1.65A)	33Ah
Discharge Current Testing (25°C)	20 I ₂₀ rate (33A, 27min)	32min
	60 I ₂₀ rate (99A, 7min)	8min
Internal Resistance (Fully charged, 25°C)	Approx. 9mΩ	
Cyclic Charging Voltage (25°C)	Initial Charging Current Less Than 9.9A Voltage 14.5~14.9V	
Float Charging Voltage (25°C)	Charge Voltage 13.6~13.8V	
Capacity affected by temperature	40°C	104%
	25°C	100%
	0°C	83%
	-15°C	65%
Self-discharge (25°C)	3 months	Remaining capacity: 91%
	6 months	Remaining capacity: 82%
	12 months	Remaining capacity: 65%

Constant current discharge characteristics (A, 25°C)

F.V/Time	5min	10min	15min	30min	60min	2h	3h	5h	8h	10h	20h
9.60V	107.6	68.9	56.7	33.2	20.3	11.8	8.6	5.7	3.8	3.1	1.8
10.2V	102.7	65.5	54.4	31.9	19.6	11.6	8.4	5.6	3.8	3.0	1.7
10.5V	99.5	63.6	53.0	31.1	19.1	11.5	8.2	5.5	3.7	3.0	1.7
10.8V	96.4	61.6	51.6	30.3	18.6	11.4	8.1	5.5	3.7	2.9	1.6

Constant power discharge characteristics (W, 25°C)

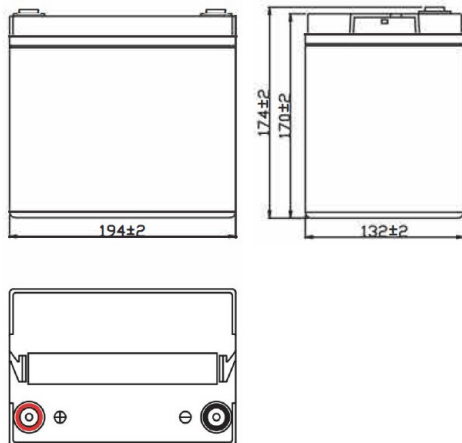
F.V/Time	5min	10min	15min	30min	60min	2h	3h	5h	8h	10h	20h
9.60V	1129.5	745.1	622.9	372.6	231.8	136.0	101.7	68.1	45.3	38.0	19.8
10.2V	1076.6	708.0	597.5	356.9	223.0	134.0	98.8	66.7	44.9	37.8	19.6
10.5V	1044.4	686.5	582.3	348.6	211.7	133.1	96.8	65.7	44.6	37.6	19.4
10.8V	1012.1	665.0	567.2	340.3	200.5	131.6	94.9	64.7	44.2	37.4	19.2

Capacity factors with different temperature

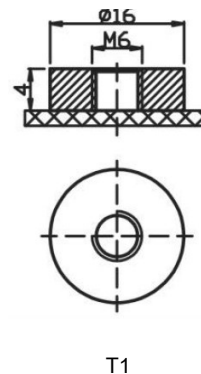
Battery Type	-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
Battery	12V	50%	70%	83%	85%	90%	98%	100%	102%	105%

Note 1: The above are average and data obtained from the first 3 charge/discharge cycles. These are not minimum values.

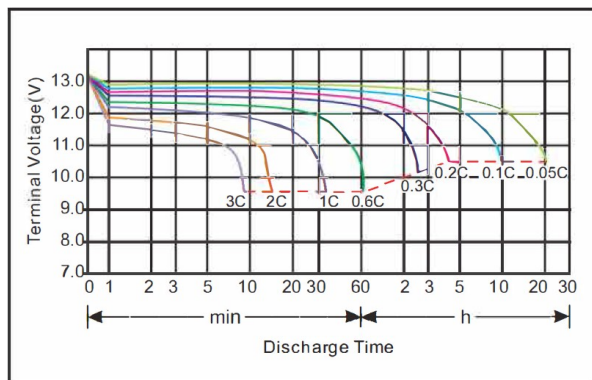
Outer dimensions (mm)



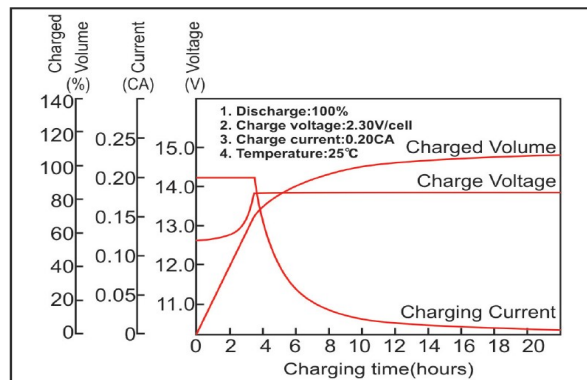
Terminal type (mm)



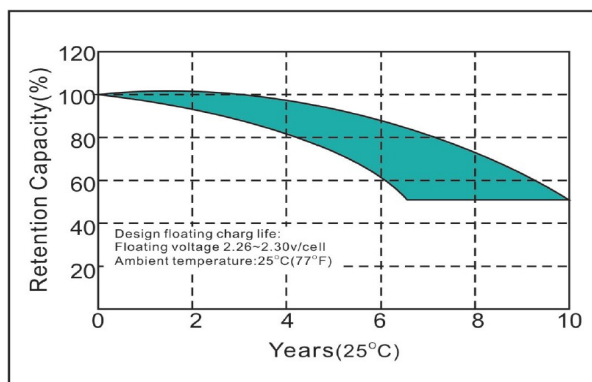
Discharge Current (25°C)



Constant voltage charging characteristics



Cycle service life in relation to the depth of discharge



Residual Capacity

