



12V 40Ah

Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	40.0AH	
Dimension	Length	197±2mm (7.76 inches)
	Width	165±2mm (6.50 inches)
	Container Height	176±2mm (6.92 inches)
	Total Height (with Terminal)	176±2mm (6.92 inches)
Approx Weight	Approx 11.8 kg (26.00 lbs)	
Terminal	T6 / T12	
Container Material	ABS	
Rated Capacity	42 AH/2.1A	(20hr, 1.75V/cell, 25°C/77°F)
	40.0 AH/4.0A	(10hr, 1.75V/cell, 25°C/77°F)
	36.5 AH/7.3A	(5hr, 1.75V/cell, 25°C/77°F)
	32.2 AH/9.89A	(3hr, 1.75V/cell, 25°C/77°F)
	24.0 AH/24.0A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	480A (5s)	
Internal Resistance	Approx 10 mΩ	
Operating Temp. Range	Discharge	-15~50°C (5~122°F)
	Charge	0~40°C (32~104°F)
	Storage	-15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 12.0A. Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto controlsystem



Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.80V/cell	102.873	82.718	59.863	44.311	22.762	10.400	7.153	3.933	2.123
1.75V/cell	105.805	85.707	61.071	45.171	23.661	10.755	7.313	4.001	2.151
1.70V/cell	113.136	90.913	63.487	45.816	23.756	10.863	7.430	4.085	2.205
1.65V/cell	116.190	92.744	65.098	46.247	23.874	11.024	7.569	4.185	2.280
1.60V/cell	122.177	96.408	67.111	40.869	24.040	11.293	7.825	4.361	2.366

Constant Power Discharge (Watts) at 25 °C (77°F)

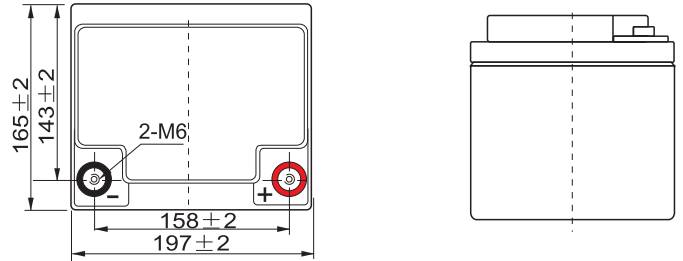
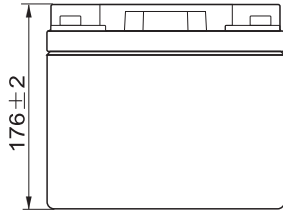
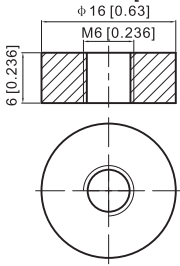
F.V/Time	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.80V/cell	183.628	149.802	110.627	82.240	42.405	19.500	13.568	7.724	4.185
1.75V/cell	192.142	156.500	113.898	84.876	44.530	20.327	13.998	7.922	4.278
1.70V/cell	207.378	168.006	119.419	86.822	45.350	20.824	14.400	8.186	4.421
1.65V/cell	214.371	172.597	123.881	88.608	43.618	21.342	14.806	8.491	4.644
1.60V/cell	226.271	180.765	128.518	78.959	46.829	22.043	15.416	8.944	4.884

Note The above data are average values, and can be obtained with 3 charge/discharge cycles. These are not minimum values.

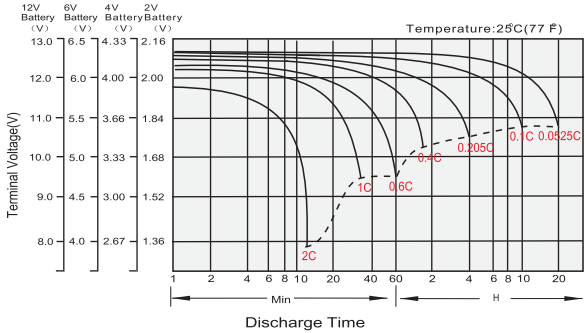
Dimensions

T6 Terminal

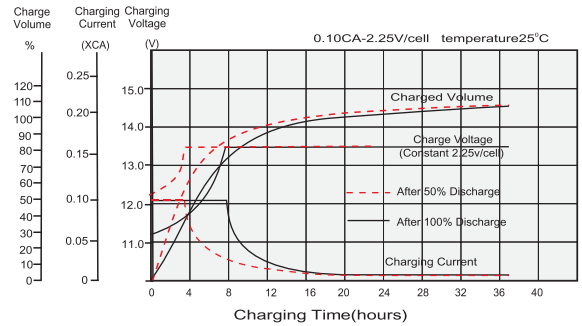
Unit: mm [inches]



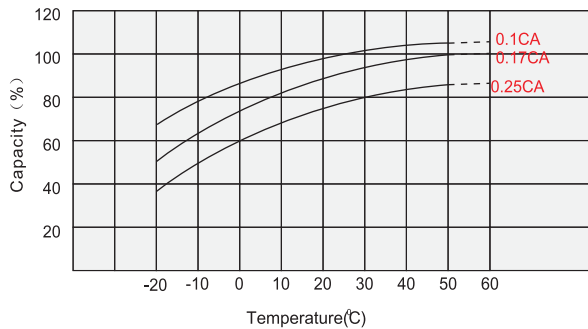
Discharge Characteristics



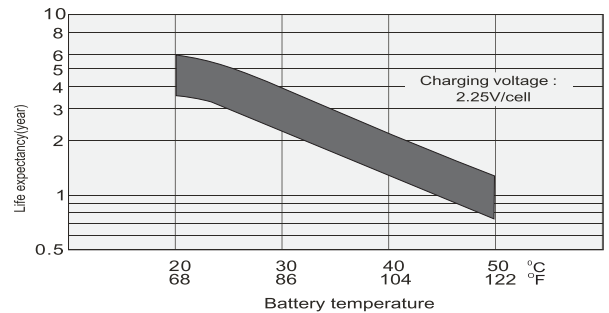
Float Charging Characteristics



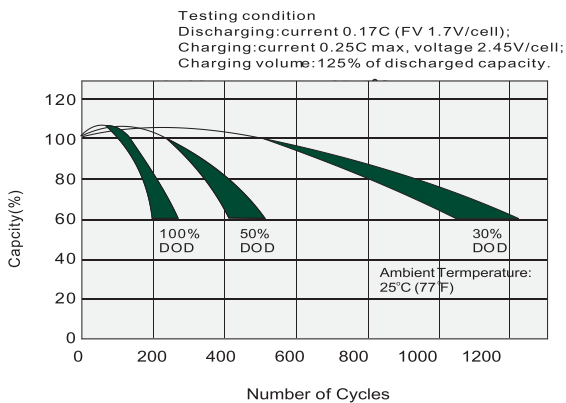
Temperature Effects in Relation to Battery Capacity



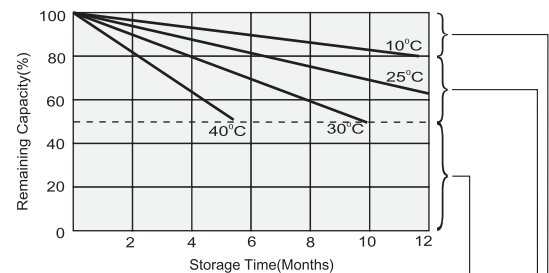
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



Supplemental charge may often fail to recover the capacity. The battery should never be left standing until this is reached.

Supplemental charge required before use. Optimal charging way as below:
1. Charged for a above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for a above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
3. Charged for 8-10 hours at limited current 0.05CA.

No supplemental charge required
(Carry out supplemental charge before use if 100% capacity is required.)