



### Applications

- > UPS/EPS
- > Power systems
- > Telecommunications system
- > Emergency lighting, Auto control system
- > Solar/wind generating storage cyclic
- > Other general purpose

### General Features

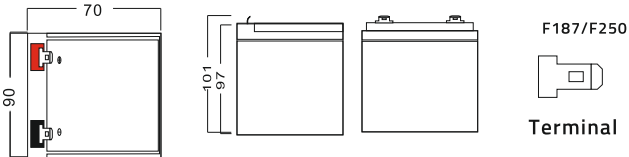
- > High corrosion resistant performance: Pb-Ca multi-alloy grid
- > High energy density and power density
- > Optimized capability of instant high-current discharging
- > Excellent charge acceptance ability
- > Strong high and low temperature performance
- > Precision sealing technology

### Specification

Nominal Voltage	12V
Nominal Capacity	4.5Ah
Design life	5 years
Terminal	F187/F250
Approx. Weight	Approx 1.50kg (3.31lbs)
Container Material	ABS
Rated Capacity	<b>4.500Ah</b> 20Hour Rate (0.225A to 10.5V)
	<b>3.51Ah</b> 3Hour Rate (1.17A to 10.5V)
	<b>2.97Ah</b> 1Hour Rate (2.97A to 9.60V)
Internal resistance	Full charged at 25 °C: 42.0 mΩ
Max. Discharge Current	<b>60A (5 sec)</b>
Operating Temperature	Discharge: -15~50°C (5~122°F)
	Charge: -10~50°C (14~122°F)
	Storage: -20~50°C (-4~122°F)
Charge current:	Max. 1.2A; Recom. 0.45A
Charge Method (25 °C)	Float Charge: 13.5-13.8V, recom. 13.5V(-18mV/ °C)
	Equalize charge: 13.8-14.1V, recom. 14.1V(-24mV/ °C)
	Cycle charge: 14.4-15.0V, recom. 14.4V(-30mV/ °C)
Self discharge	3% of capacity declined per month at 25°C



Dimension: 90(L)×70(W)×97(H) ×101(TH) Unit: mm



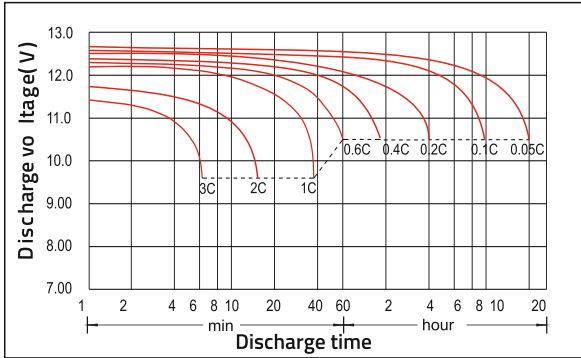
### Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	17.8	11.7	8.69	5.69	2.97	1.70	1.24	0.995	0.846	0.558	0.446	0.239
1.65V	17.7	11.2	7.97	5.40	2.79	1.63	1.21	0.963	0.828	0.549	0.441	0.234
1.70V	14.5	10.5	7.43	5.24	2.70	1.60	1.18	0.914	0.819	0.540	0.432	0.230
1.75V	13.5	10.0	6.93	5.12	2.61	1.56	1.17	0.900	0.783	0.527	0.423	0.225
1.80V	12.4	9.41	6.44	4.95	2.52	1.52	1.10	0.882	0.752	0.513	0.414	0.216

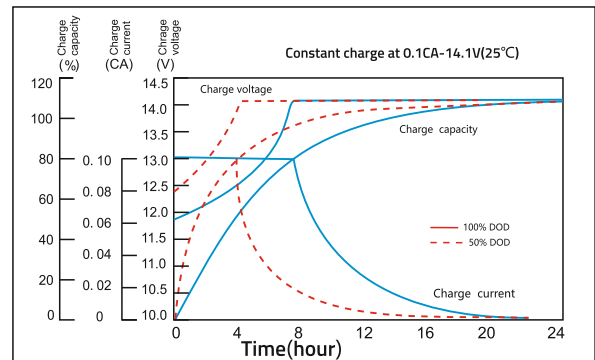
### Constant Power Discharge Characteristics Unit: W/cell (25°C, 77°F)

FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	33.5	21.0	15.9	9.62	5.45	3.19	2.35	1.88	1.60	1.05	0.863	0.473
1.65V	30.8	19.9	14.9	9.55	5.12	3.07	2.28	1.82	1.57	1.04	0.847	0.460
1.70V	28.2	19.3	14.3	9.52	4.97	3.01	2.24	1.73	1.52	1.03	0.840	0.456
1.75V	25.6	18.7	13.7	9.42	4.82	2.94	2.21	1.71	1.49	0.985	0.821	0.446
1.80V	23.0	18.1	13.1	9.35	4.76	2.92	2.15	1.70	1.46	0.952	0.804	0.443

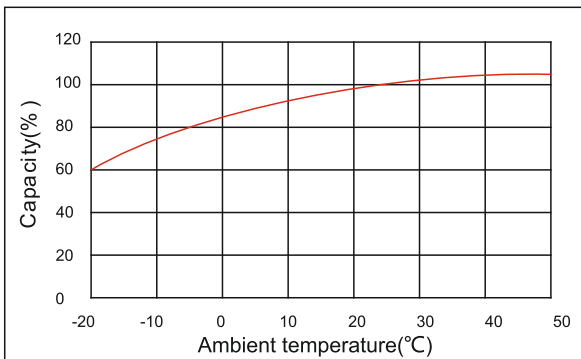
## Discharge characteristic



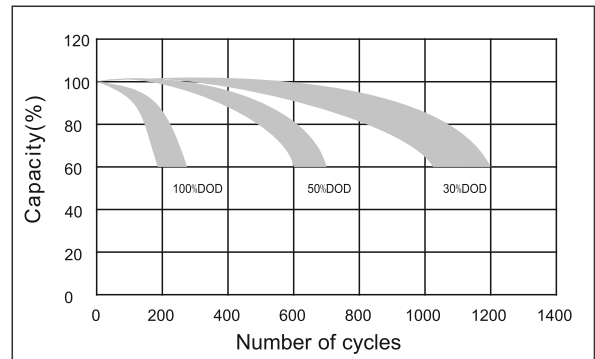
## Charging characteristic



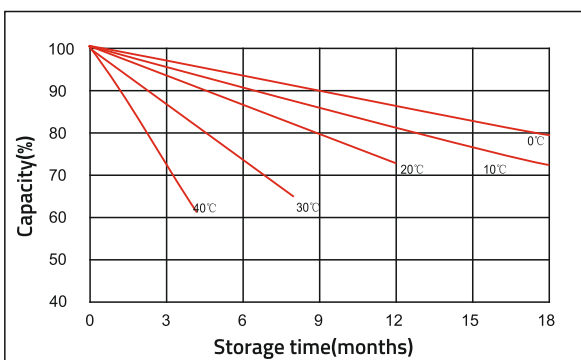
## The effect of temperature on capacity



## The effect of discharge depth on cycle life



## Curves of self-discharge



## The effect of temperature on float life

