PATTERN BATTERY TECHNOLOGY CO., LIMITED
DEEP CYCLE AGM BATTERY
Head office :Room 1409,East Block,Costal Building,Hai De San Dao,Nanshan District,Shenzhen City,CHINA
E-mail: info@patternbattery.com
Web:www.patternbattery.com Office line:+86-755-86524336

PT SERIES
PT 12-18

Specification

Nominal Voltage	12V
Nominal Capacity(20HR)	18.0AH
Dimensions	Length 181.5±2mm (7.14 inches) Width 77±2mm (3.03 inches) Container Height 167.5±2mm (6.59 inches) Total Height (with Terminal) 167.5±2mm (6.59 inches)
Approx Weight	Approx 5 kg
Terminal	F4
Container Material	ABS
Rated Capacity	20.0 AH/1.00A (20hr ,1.80V/cell,25℃/77℉) 18.6 AH/1.86A (10hr,1.80V/cell,25℃/77℉) 16.0 AH/3.20A (5hr,1.75V/cell,25℃/77℉) 15.0 AH/5.00A (3hr,1.75V/cell,25℃/77℉) 12.2 AH/12.2A (1hr,1.60V/cell,25℃/77℉)
Max. Discharge Current	300A (5s)
Internal Resistance	Approx 15mΩ
Operating Temp.Range	Discharge : -15 50℃ (5 122℉) Charge : 0 40℃ (32 104℉) Storage : -15 40℃ (5 104℉)
Nominal Operating Temp. Range	25±3℃ (77±5℉)
Cycle Use	Initial Charging Current less than 6.0A.Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/℃
Standby Use	No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/℃
Capacity affected by Temperature	40°C (104°F) 103% 25°C (77°F) 100% 0°C (32°F) 86%
Self Discharge	Pattern PT series battery may be stored for up to 6 months at 25℃(77℉) 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 control system*

Intertek
ISO14001 ISO9001 CE

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

20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h	V/cell
19.000	15.200	11.600	9.400	6.000	4.600	3.800	3.000	2.600	2.200	1.767	0.960	1.85
22.600	17.800	12.600	10.600	6.400	4.800	4.000	3.100	2.800	2.480	1.860	1.000	1.80
24.400	18.600	13.400	11.000	6.600	5.000	4.200	3.200	2.900	2.600	1.916	1.040	1.75
25.600	19.400	14.200	11.400	6.800	5.200	4.360	3.400	3.000	2.900	1.990	1.080	1.70
27.000	20.000	14.800	11.800	7.200	5.400	4.500	3.600	3.100	3.000	2.065	1.120	1.65
28.000	21.000	15.400	12.200	7.600	5.600	4.700	3.800	3.300	3.200	2.139	1.160	1.60

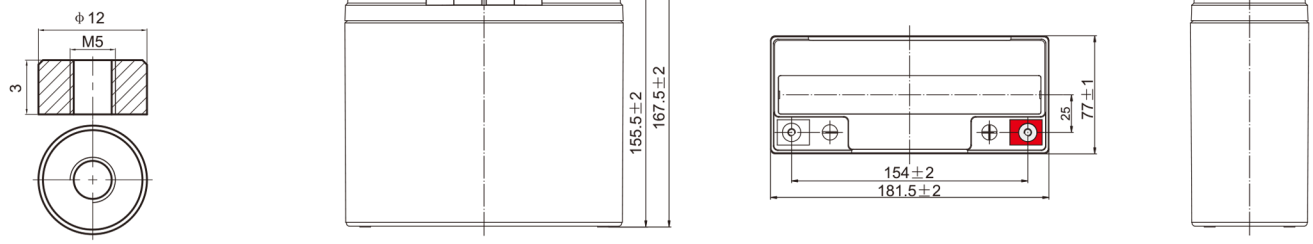
Constant Power Discharge (Watts/cell) at 25 C (77F)

20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h	V/cell
35.150	28.120	21.460	17.390	11.100	8.510	7.030	5.550	4.810	4.070	3.269	1.776	1.85
40.680	32.040	22.680	19.080	11.520	8.640	7.200	5.580	5.040	4.464	3.348	1.800	1.80
42.700	32.550	23.450	19.250	11.550	8.750	7.350	5.600	5.075	4.550	3.353	1.820	1.75
43.520	32.980	24.140	19.380	11.560	8.840	7.412	5.780	5.100	4.930	3.383	1.836	1.70
44.550	33.000	24.420	19.470	11.880	8.910	7.425	5.940	5.115	4.950	3.407	1.848	1.65
44.800	33.600	24.640	19.520	12.160	8.960	7.520	6.080	5.280	5.120	3.422	1.856	1.60

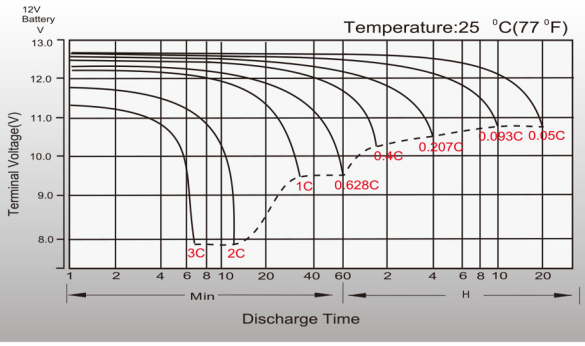
Dimensions

F4 Terminal

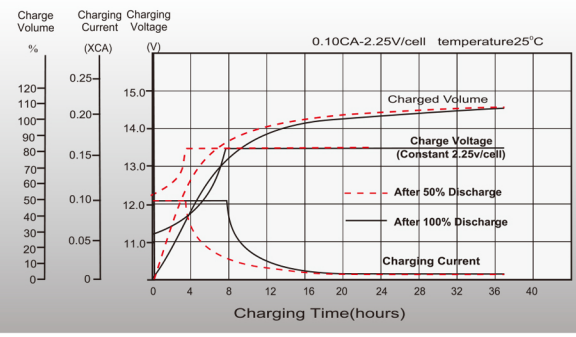
Unit: mm



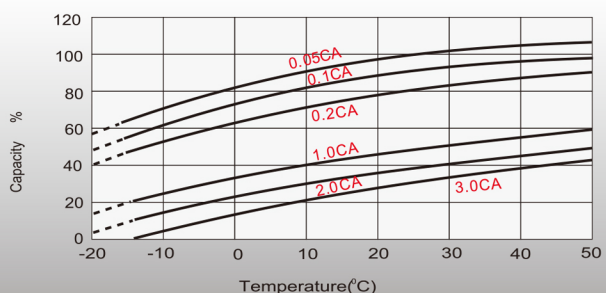
Discharge Characteristics



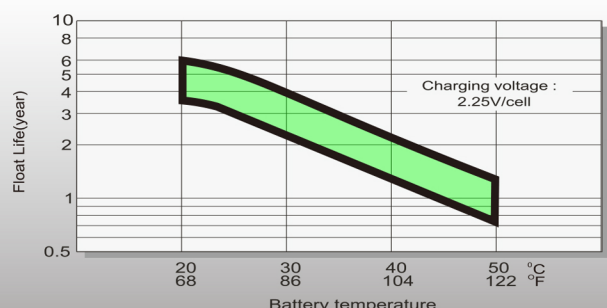
Float Charging Characteristics



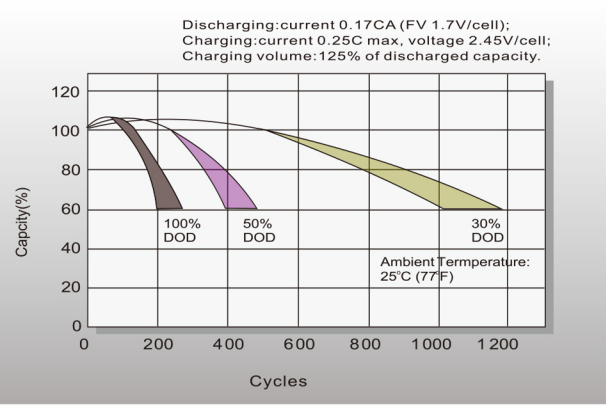
Temperature Effects in Relation to Battery Capacity



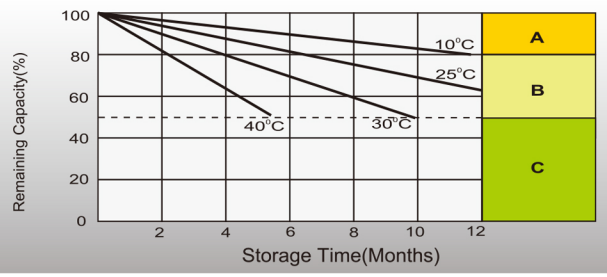
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



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

B Supplementary charge required before use.Optional charging way as below:
1.Charged for above 3 days at limted current 0.25CA and constant volatge 2.25V/cell.
2.Charged for above 20hours at limted current 0.25CA and constant volatge 2.45V/cell.
3.Charged for 8~10hours at limted current 0.05CA .

C Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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