



**NON-SPILLABLE**

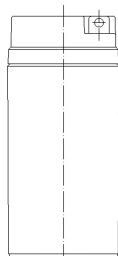
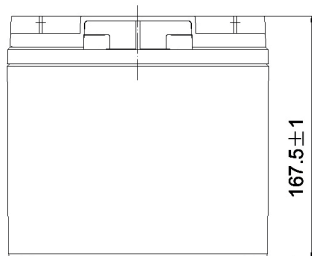
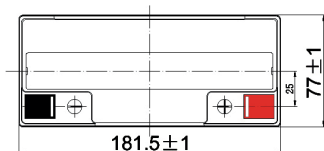
**CYCLE LIFE UP TO 500**

**AGM**

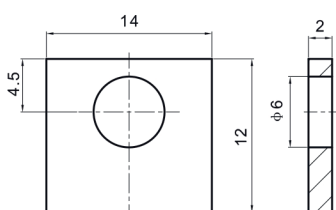
FPC Series are deep cycle batteries specially designed for long duration cyclic applications, ie with use in charge and then intensive discharge. With advanced AGM valve regulated technology and oversized negative plates, the FPC Series ensure very good cyclic performance with greater depth of discharge for mobility-type applications such as medical, golf and also renewable energies storage. In harsh use conditions (high temperature, higher deep of discharge...), the Gel FPG range is recommended.

## DIMENSIONS & WEIGHT

LENGHT	181.5±2mm
WIDTH	77±1mm
TOTAL HEIGHT	167.5±2mm
WEIGHT	6.0kg (tolerance ± 3%)



## TERMINAL (MM)



## SPECIFICATION

Nominal voltage	12V (6 cells)
Nominal capacity	20Ah (20hr)
Cycle life	Up to 400 cycles at 80% DOD* (80% capacity - 20°C) Up to 500 cycles at 50% DOD* (80% capacity - 20°C)
Internal resistance	Approx 15mΩ
Terminal	T3
Max. discharge current	270A (5 sec)
Reference capacity	20.0Ah (20hr, 1.80V/cell, 25°C/77°F) 18.0Ah (10hr, 1.80V/cell, 25°C/77°F) 15.8Ah (5hr, 1.75V/cell, 25°C/77°F) 14.3Ah (3hr, 1.75V/cell, 25°C/77°F) 11.6Ah (1hr, 1.60V/cell, 25°C/77°F)

Charge voltage	13.5V ~ 13.8V 25°C/77°F
Standby use voltage	Temperature compensation: -20mV/°C/Cell
Cycle use voltage	14.4V ~ 15.0V 25°C/77°F Temperature compensation: -20mV/°C/Cell
Operating temp. range	Discharge: -15°C ~ 50°C Charge: 0°C ~ 40°C Storage: -15°C ~ 40°C
Nominal operating temp. range	25°C ± 3°C / 77°F ± 5°F
Self discharge	Can be stored for up to 6 months at 25°C/77°F and then recharging is recommended. Monthly self-discharge ratio is less than 3% at 25°C/77°F
Capacity affected by temp.	40°C/104°F 103% 25°C/77°F 100% 0°C/32°F 86%
Container material	A.B.S. UL94-HB

\*DOD = Depth of discharge

## APPLICATIONS



Mobility



Golf Caddy



Solar



Leisure



Marine



Wind

## APPROVALS

ISO9001 - Quality management system  
ISO14001 - Environmental management System  
Approved for transport by Air (IATA)

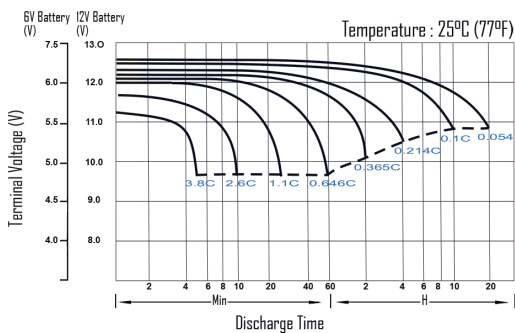
## CONSTANT CURRENT DISCHARGE (AMPERES) AT 25°C/77°F

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	26.4	22.2	19.4	13.9	11.1	8.99	5.58	4.35	3.53	2.87	2.50	2.04	1.70	0.956
1.80V/cell	33.7	26.8	22.9	16.5	12.9	10.1	6.09	4.68	3.77	3.08	2.68	2.16	1.80	0.965
1.75V/cell	37.0	29.3	24.6	17.1	13.4	10.5	6.32	4.77	3.85	3.16	2.75	2.20	1.82	0.974
1.70V/cell	40.3	31.2	25.9	17.8	13.9	10.9	6.57	4.90	3.95	3.24	2.81	2.23	1.84	0.992
1.65V/cell	43.5	33.2	27.5	18.8	14.2	11.2	6.75	5.11	4.09	3.33	2.87	2.27	1.87	1.004
1.60V/cell	47.3	35.5	29.3	19.8	14.9	11.6	6.98	5.27	4.22	3.44	2.94	2.29	1.89	1.010

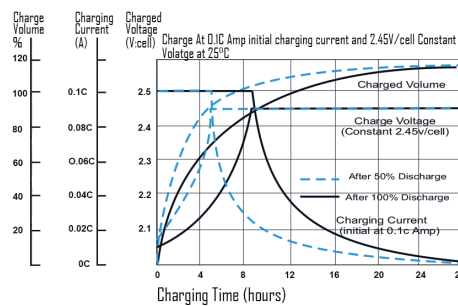
## CONSTANT POWER DISCHARGE (WATTS/CELL) AT 25°C/77°F

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	49.2	41.8	36.9	26.8	21.4	17.4	10.9	8.50	6.90	5.63	4.94	4.04	3.37	1.91
1.80V/cell	62.0	49.8	43.0	31.2	31.2	19.4	11.8	9.11	7.34	6.02	5.28	4.27	3.56	1.93
1.75V/cell	67.3	53.8	45.9	32.3	25.5	20.2	12.2	9.25	7.48	6.17	5.41	4.34	3.60	1.94
1.70V/cell	72.3	57.1	47.9	33.5	26.5	20.8	12.7	9.49	7.67	6.31	5.52	4.40	3.63	1.98
1.65V/cell	77.5	60.3	50.7	35.1	27.0	21.5	13.0	9.86	7.91	6.48	5.63	4.47	3.70	2.00
1.60V/cell	82.7	63.7	53.4	36.7	27.9	22.0	13.3	10.1	8.13	6.66	5.74	4.50	3.74	2.01

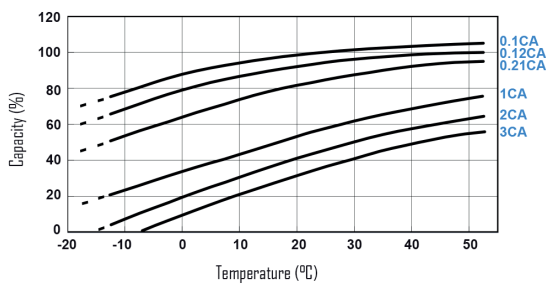
## DISCHARGE CHARACTERISTICS



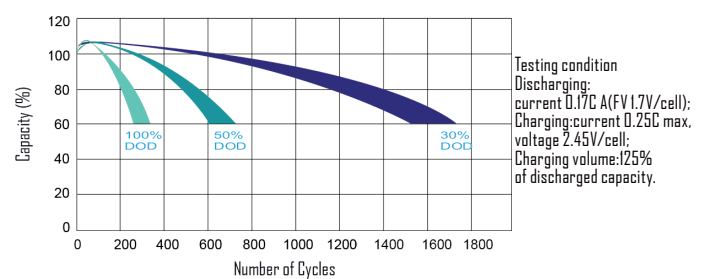
## CHARGING CHARACTERISTICS (CYCLE USE)



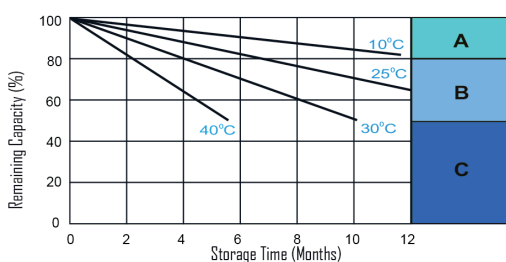
## TEMPERATURE EFFECTS IN RELATION TO BATTERY CAPACITY



## 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 limited current 0.25CA and constant voltage 2.25V/cell  
2. Charged for 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
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached