

UP Series FTG250-12

**FRONT TERMINAL
- DEEP CICLE GEL -**



Main Features

- UP-FTG (Front terminal Deep Cycle GEL) series is hybrid GEL battery with 12 years design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments.
- By using strong grids, high purity lead and patented Gel electrolyte, the UP-FTG series offers excellent recovery capability after deep discharge under frequent cyclic discharge use, and can deliver 450 cycles at 100% DoD.
- Suitable for solar & wind system, RV and deep discharge UPS, etc.

Technical Specifications

Cells per Unit	6
Voltage per Unit	12 V
Nominal Capacity	250 Ah @ 100 hr-rate to 1.75 V per cell @ 25°C
Weight	Approx. 54.0 Kg (Tolerance ± 3.0%)
Internal Resistance	Approx. 4.0 mΩ
Terminal	F9 (M8)
Maximum Discharge Current	2000 A (5 sec)
Design Life	12 years (floating charge)
Maximum Charging Current	60.0 A
Reference Capacity	C3 153.0 Ah
	C5 172.0 Ah
	C10 190.0 Ah
	C20 200.0 Ah
	C100 250.0 Ah
Float Charging Voltage	13.6 V ~ 13.8 V at 25°C Temperature Compensation: -3 mV/°C/Cell
Cycle Use Voltage	14.6 V ~ 14.8 V @ 25°C Temperature Compensation: -4 mV/°C/Cell
Operating Temperature Range	Discharge: -20°C ~ 60°C
	Charge: 0°C ~ 50°C
	Storage: -20°C ~ 60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated GEL (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly self-discharge ratio is less than 3% at 25°C. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



Dimensions

Length	560±2mm (22.1 inches)
Width	125±2mm (4.92 inches)
Height	316±2mm (12.4 inches)
Total Height	316±2mm (12.4 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

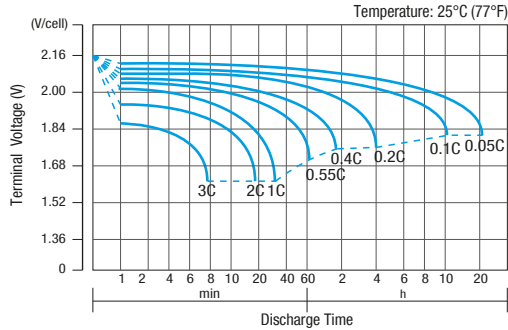
Unit: mm

Constant Current Discharge Characteristics: A (25°C)										
F.V/Time	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	332.8	209.2	121.5	72.3	56.3	44.2	37.6	24.1	20.0	10.4
1.65 V	311.2	198.1	117.3	69.9	54.6	42.9	36.4	23.9	19.8	10.3
1.70 V	292.7	187.9	113.6	68.1	52.3	41.6	35.4	23.5	19.4	10.2
1.75 V	274.1	180.4	110.0	65.4	51.0	40.4	34.4	23.2	19.2	10.0
1.80 V	251.0	173.8	105.1	63.2	50.0	39.5	34.0	22.8	19.0	9.90
1.85 V	207.7	147.4	93.8	57.8	46.5	37.0	31.3	21.5	17.9	9.81

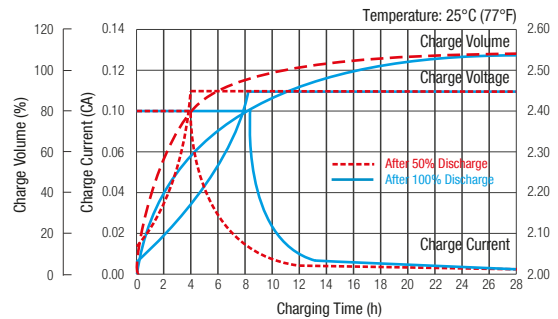
Constant Power Discharge Characteristics: W/Cell (25°C)										
F.V/Time	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	580.6	380.0	228.0	136.8	107.0	85.2	71.2	47.0	39.2	20.7
1.65 V	564.5	371.2	224.1	133.1	104.3	83.1	69.2	46.6	38.8	20.5
1.70 V	534.3	353.3	217.6	129.8	100.3	80.5	67.5	46.1	38.1	20.3
1.75 V	504.3	340.9	211.5	125.1	97.9	78.6	66.0	45.3	37.7	20.0
1.80 V	466.2	329.9	202.9	122.3	97.3	77.1	65.1	44.6	37.3	19.77
1.85 V	391.7	282.9	182.2	112.6	90.8	72.5	60.2	42.1	35.3	19.58

*Note: All the above data are average values obtained within three charge/discharge cycle not the minimum values.
The battery must be fully charged before the capacity test. The C20 should reach 95% after the first cycle and 100% after the third cycle.*

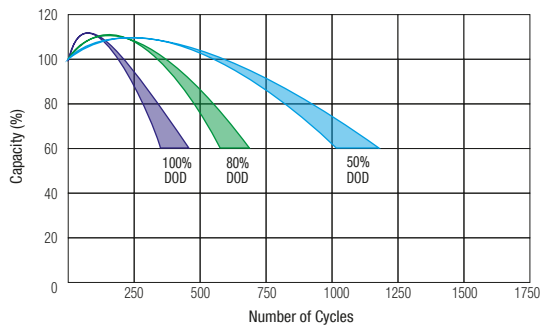
Discharge Characteristics Curve



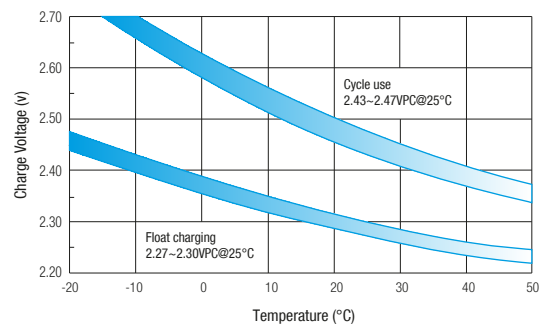
Charge Characteristic Curve for Standby Use (IU)



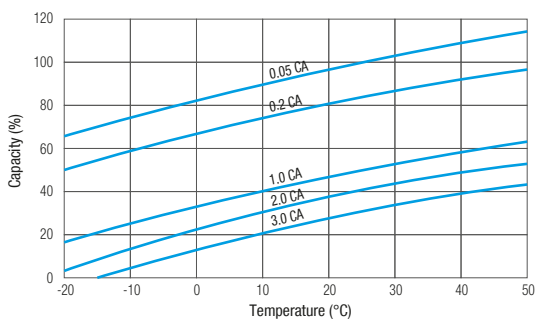
Cycle Life in Relation to Depth of Discharge



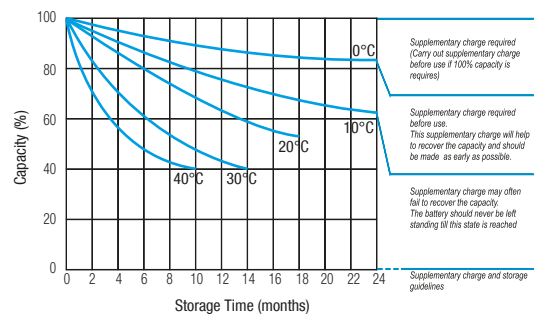
Relationship between Charging Voltage and Temperature



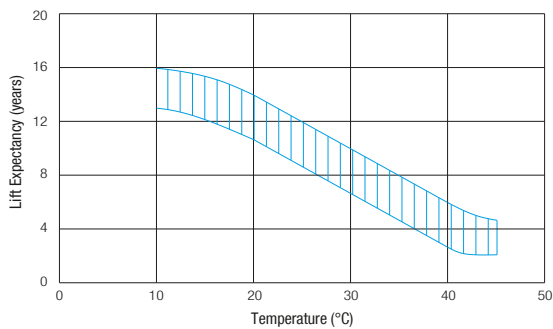
Temperature Effects on Capacity



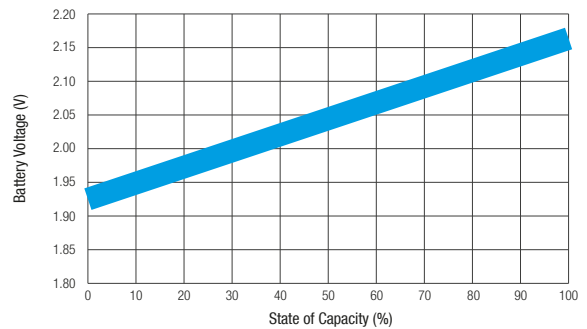
Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV and State of Charge(20°C)



Product specifications are subject to change without further notice.