

# UP Series CG18-12

C A R B O N G E L



## Main Features

- The carbon can greatly slow down the sulfate of negative plate due to the PSOC cycle application.
- Excellent partial stage of charge (PSOC) cycle performance.
- Excellent recharge acceptance performance, super fast charge / large discharge performance.
- Excellent temperature tolerance, capacity increased 16% at -20°C.

### Complied Standards

- IEC 61056
- JIS C8702
- GB/T19639

12 V  
voltage

18 Ah  
capacity

GEL  
technology

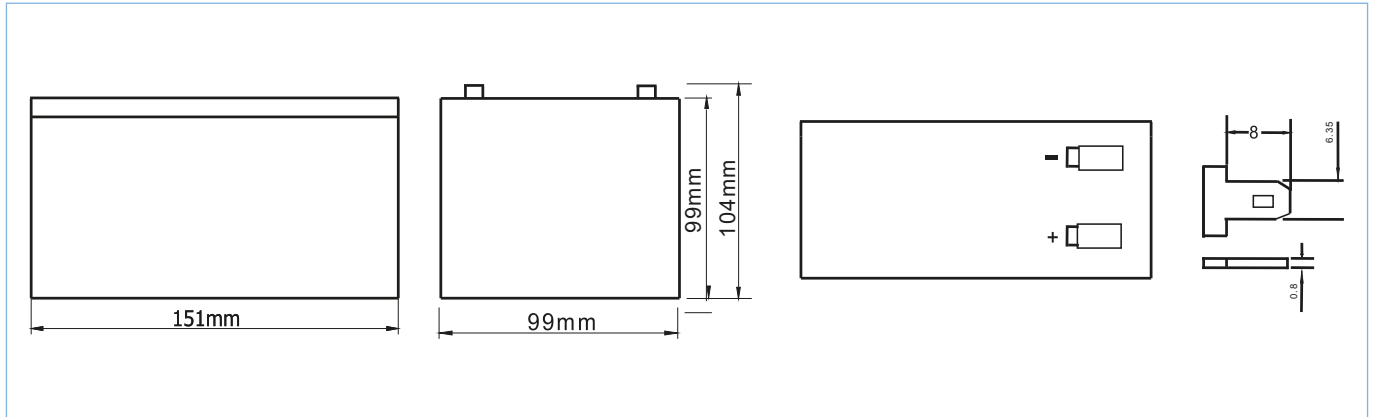
5 years  
design life



## Technical Specifications

Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (20°C)	5 Years
Nominal Capacity (25°C)	18 Ah @ 20 Hr - rate (to 1.75 Vpc) 21 Ah @ 100 Hr - rate (to 1.75 Vpc)
Dimension, L x W x H (mm)	151 x 99 x 104
Approx. Weight	4.2 Kg (9.2 lbs)
Terminal Type	F2 Fasten 6.3 mm
Internal Resistance	Approx. 0.019 Ω (fully charged @ 25°C)
Maximum Charge Current	3 A
Maximum Discharge Current (5S)	120 A
Short Circuit Current	360 A
Self Discharge	Approx. 3% per month @ 20°C
Ambient Temperature	Discharge: -15 ~ 55°C Charge: -15 ~ 45°C Storage: -15 ~ 45°C
Float Charge Voltage (20~25°C)	13.7 - 13.9 V (-3 mV / cell / °C)
Equalize and Cycle Use Charge Voltage (20~25°C)	14.3 - 14.6 V (-5 mV / cell / °C)
Container Material	ABS (UL94-V0 optional)

## Battery Dimensions

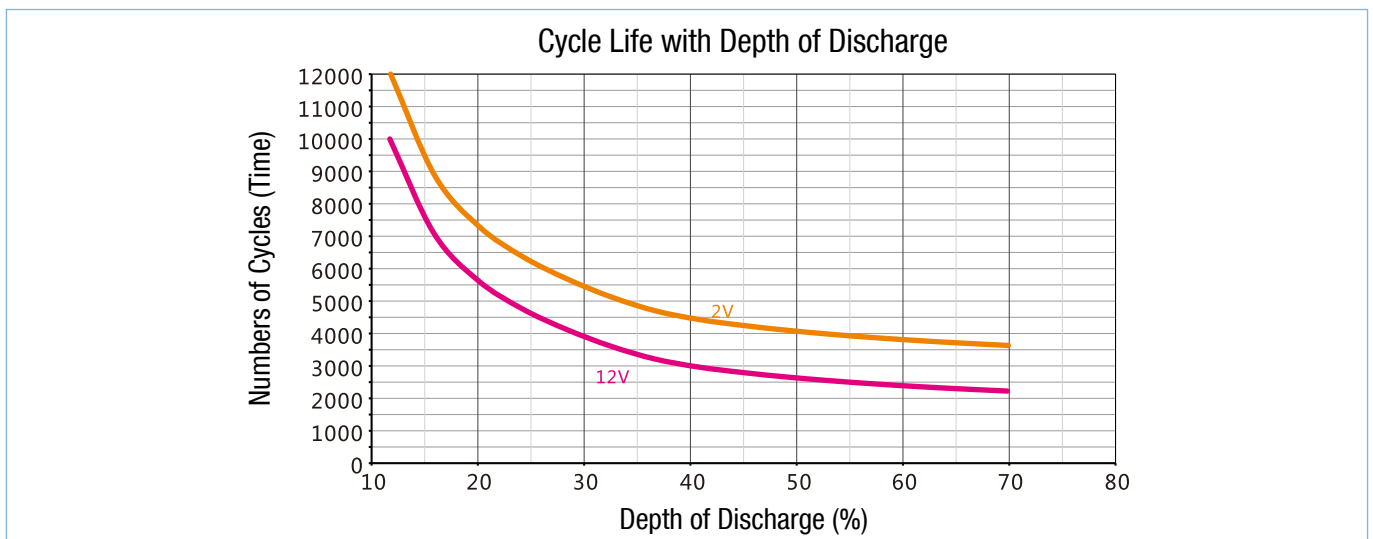


## Battery Discharge Table

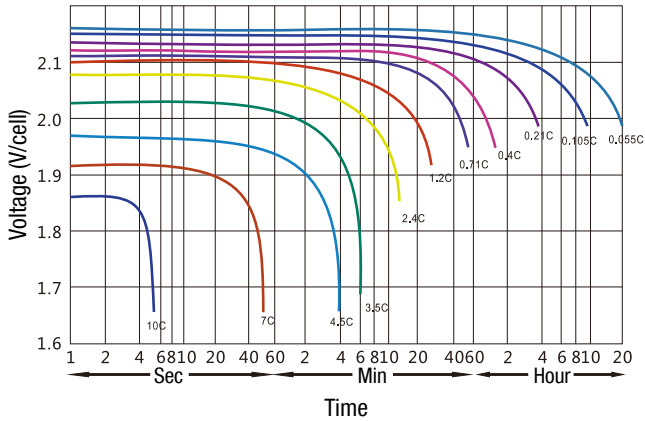
Constand Current Discharge (25°C)												
F.V/Time	1 HR		3 HR		5 HR		10 HR		20 HR		100 HR	
	Current (Amps)	Capacity (Ah)	Current (Amps)	Capacity (Ah)	Current (Amps)	Capacity (Ah)	Current (Amps)	Capacity (Ah)	Current (Amps)	Capacity (Ah)	Current (Amps)	Capacity (Ah)
1.75 V	10.2	10.2	4	12	2.7	13.5	1.56	15.6	0.858	18	0.21	21

*Note: The above data are average values, and can be obtained within 5 charge / discharge cycles. These are not minimum values. Cell and battery designs / specifications are subject to modification without notice. Contact UPOWER, LTD for the latest information.*

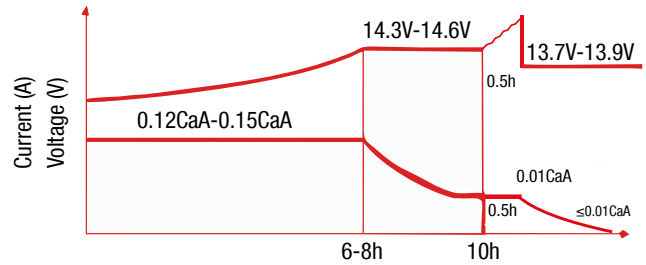
## Performance Curve



Discharging Characteristics (25°C / 77°F)

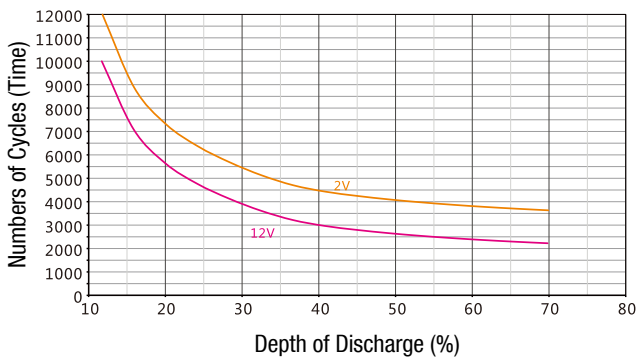


Charge Characteristic Curve

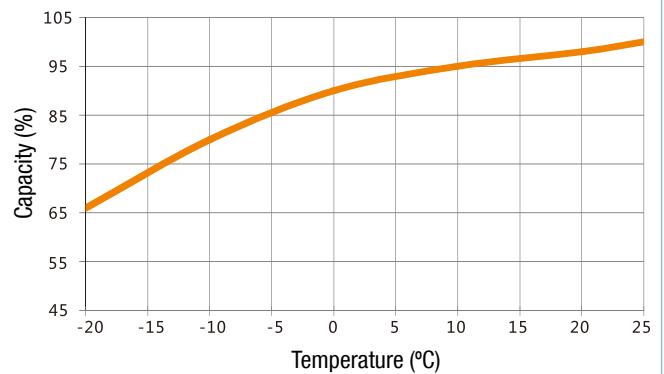


Step 1: Constant current charging with 0.12-0.15CaA until voltage reach to 14.3-14.6V  
 Step 2: Constant voltage charging with 14.3-14.6V until current is less than 0.01CaA  
 Step 3: Constant current charging with 0.01CaA for 0.5h  
 Step 4: Float charging at voltage 13.7-13.9V

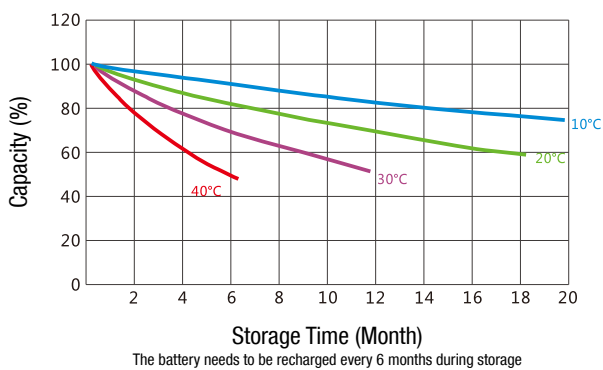
Cycle Life with Depth of Discharge



Capacity Effected by Temperature



Self Discharge Characteristics



Charging Time with Depth of Discharge

