



POWER SOLID

The Crown of Power Solution

GEL Deep Cycle Battery

PS-12400-GS

12V , 40Ah

### General Features

- Designed floating charging service life: 12 years (25°C)
- Safety valve installation for explosion proof ,Sealed and maintenance free operation
- By using strong grids, high purity lead and patented Gel electrolyte
- Extremely low self-discharge characteristic
- Wide operating temperature range from -20°C~55°C
- Lead Aluminum calcium Tin alloy high energy, prevent corrosion
- Maximum discharge current :400 Amperes for 5 seconds

### Application

- DC power supply
- UPS/EPS power supply
- Electrical devices & instruments
- Security and fire alarm systems
- Telecom stations and power stations
- Medical equipments
- Emergency lighting systems

### Constant-Voltage Charge



Rated Capacity	
20 hour rate (1.9A)	42.8AH
10 hour rate (3.8A)	40.0AH
5 hour rate (6.46A)	33.0AH
3 hour rate (9.5A)	29.0AH
1 hour rate (20.9A)	21.0AH
Capacity affected by Temperature	
40°C(104°F)	103%
25°C(77°F)	100%
0°C(32°F)	86%

Cycle Application	
1. Limit initial current less than 10.0A.	
2. Charge until battery voltage (under charge) reaches 14.1V to 14.4V at 25°C(77°F).	
3. Hold at 14.1V to 14.4V until current drop to under0.23A for at least 3 hours.	
4. Temperature compensation coefficient of charging voltage is -30mV/°C.	
Standby Service	
1. Hold battery across constant voltage source of 13.6 to 13.8 volts with current limit 10.0A continuously .When held at this voltage , the battery will seek its own current level and maintain itself in a fully charge status.	
2. Temperature compensation coefficient of charging voltage is -18mV/°C.	

### Battery Discharge Table

End Voltage (V)	Minute (M)					Hour (H)							
	5	10	15	30	45	1	1.5	2	3	5	8	10	20
<b>Constant Current Discharge Data Sheet (Amperes at 25°C)</b>													
10.20	123.4	93.81	70.67	37.55	34.77	24.43	19.29	16.16	10.12	7.04	5.00	4.15	2.21
10.50	109.0	85.99	66.14	36.00	33.23	23.45	18.54	15.56	9.79	6.72	4.73	4.10	2.17
10.80	101.6	78.18	61.82	34.77	31.68	22.48	17.78	14.97	9.45	6.43	4.50	3.98	2.11
<b>Constant Power Discharge Data Sheet (Watt at 25°C)</b>													
10.20	1223	1036	752	468	352	305.5	223.2	167.7	125.5	80.65	59.76	50.82	26.62
10.50	1177	879	675	458	344	301.4	219.1	162.5	121.4	78.18	59.04	49.27	25.80
10.80	1094	821	645	447	332	287.0	209.8	156.4	117.3	75.40	58.22	46.91	25.21

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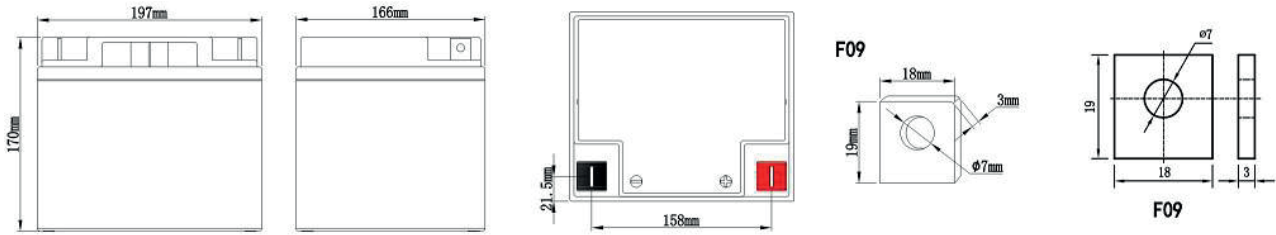
**PS-12400-GS**

**12V ,40Ah**

## Physical Specifications

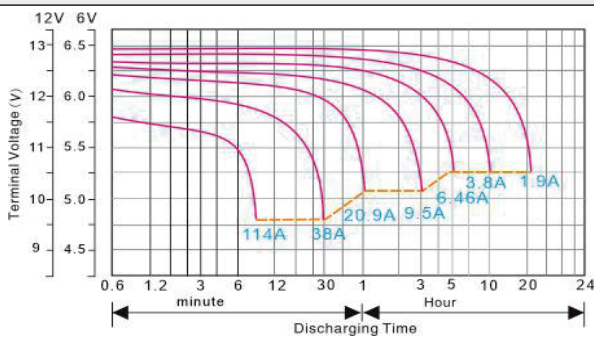
Nominal Voltage	Nominal Capacity (10HR)	Dimension				Weight ±3%	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V	40AH	197±2mm	166±2mm	170±2mm	170±2mm	Approx 11.6kg (25.5lbs)	≈8.0mΩ	F09 (standard)

## Dimensions(mm)

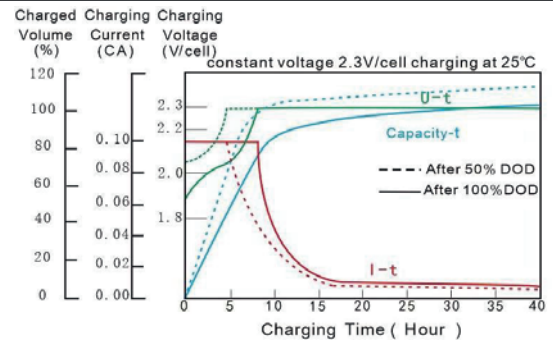


## Performance Characteristics

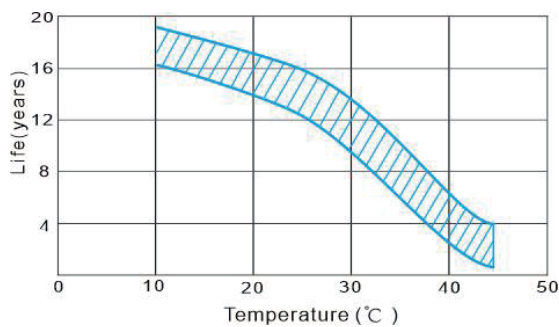
**Discharge Characteristic (25°C/77°F)**



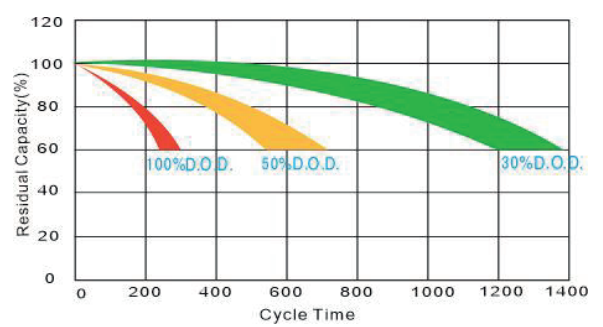
**Charge Characteristics (25°C/77°F)**



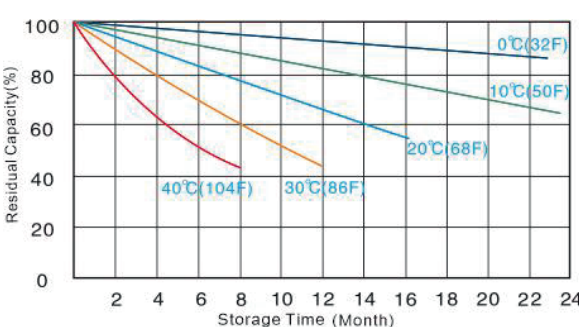
**Temperature vs Float Life**



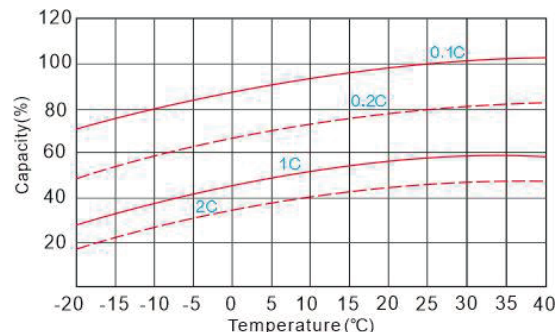
**Cycle Life in Relation to Depth of Discharge**



**Self Discharge Characteristics**



**Capacity Curve At Different Temperature**



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