

## OPzV Deep Cycle Tubular GEL Battery

## OPzV12-100

CSBattery OPzV series Tubular GEL battery is with 25 years floating design life, it is a Valve Regulated Tubular Gel battery that adopts immobilized GEL and Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN standards and with die-casting positive grid and patent formula of active material. OPzV series exceeds DIN standard values with more than 25 years floating design life at 25°C and is even more suitable for cyclic use under extreme operating conditions.

12V  
100Ah

GEL  
Technology

Tubular  
Plate



### Applications

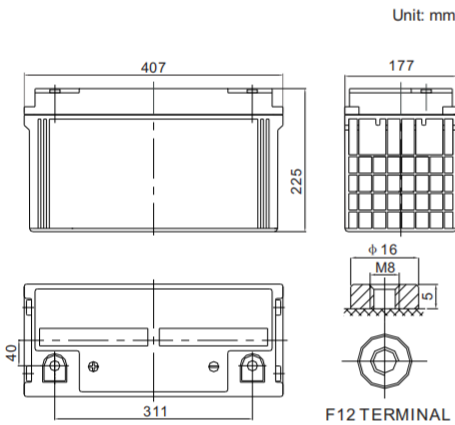
- Solar & Wind Power system
- Nuclear power station
- Telecom backup power supply
- energy saving requirements  
Emergency Power System

### General Features

- ✓ It can discharge at -40°C~70°C, Charge at 0-50°C
- ✓ Long life expectancy of 20+ years in floating condition
- ✓ Adopts quality silicon nano gel electrolyte
- ✓ Excellent deep discharge recovery capability
- ✓ Deep cycle performance: up to 3300

### Dimensions & Weight

### Technical Specifications



Length	407±1mm (16.0 inches)
Width	177±1mm (6.97 inches)
Height	225±1mm (8.86 inches)
Total Height	225±1mm (8.86 inches)
Torque Value	10-12 N*m

<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Nominal Capacity</b>	100Ah@10hr-rate to 1.80V per cell @25°C
<b>Weight</b>	Approx. 36.0 Kg (Tolerance±2%)
<b>Internal Resistance</b>	Approx. 8 mΩ
<b>Terminal</b>	F5(M8)/F12(M8)
<b>Max. Discharge Current</b>	1000A (5 sec)
<b>Design Life</b>	18 years (floating charge)
<b>Maximum Charging Current</b>	20.0 A
<b>Reference Capacity</b>	C24 100.7AH C48 106.4AH C72 111.7AH C100 114.0AH C120 116.3AH C240 123.1AH
<b>Float Charging Voltage</b>	13.5 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°C~60°C
<b>Normal Operating Temperature Range</b>	25°C ±5°C
<b>Self Discharge</b>	RITAR Valve Regulated Lead Acid (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 2% at 25°C. Please charged batteries before using.
<b>Container Material</b>	A.B.S. UL94-HB, UL94-V0 Optional.

### Battery Discharge Table

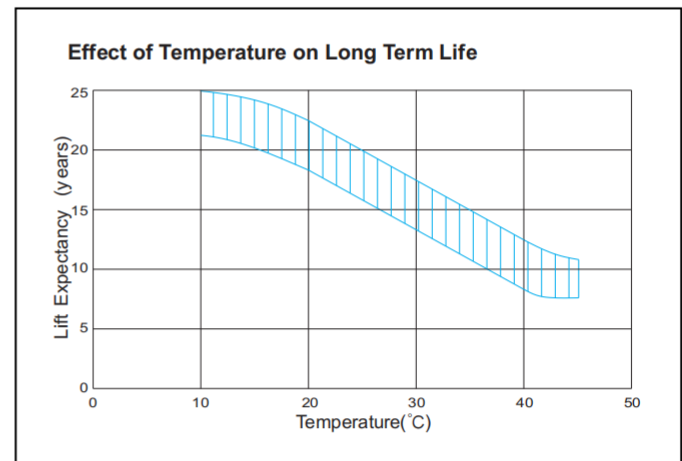
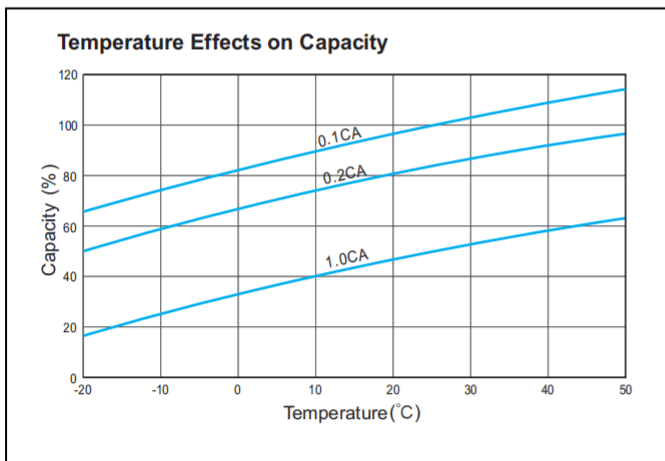
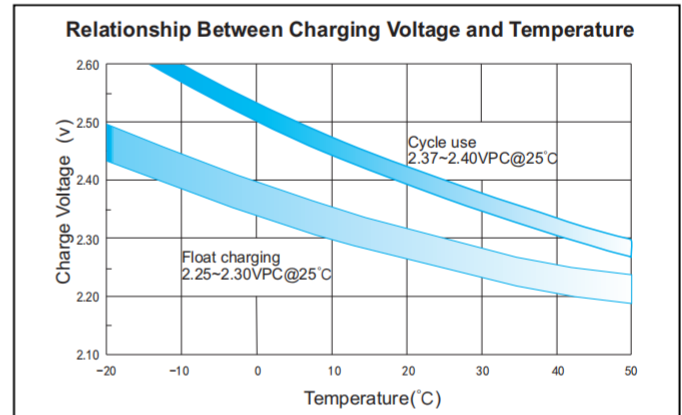
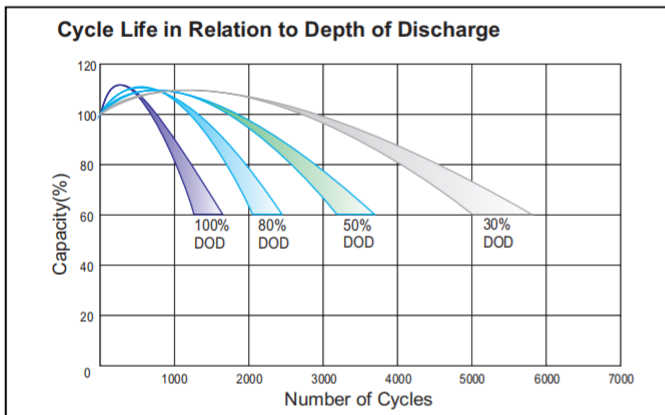
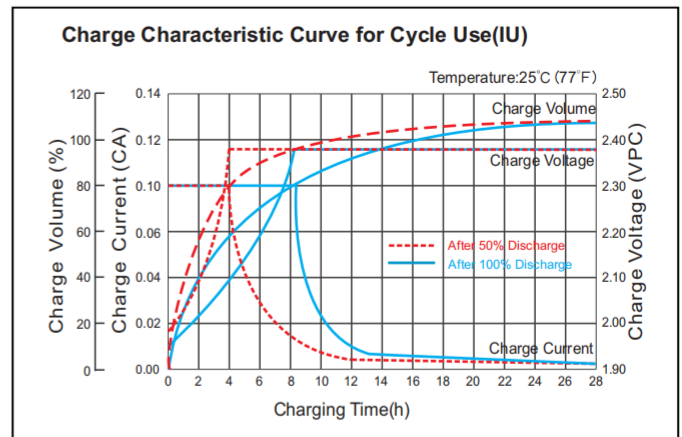
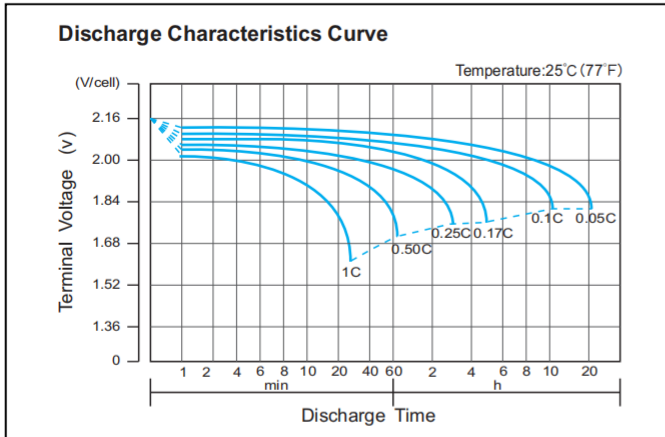
#### Discharge Constant Current per Cell (Amperes at 25° C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	49.20	39.00	27.51	20.86	17.10	14.78	13.30	10.38	8.900	4.673
1.87V	55.00	43.00	29.51	22.12	18.05	15.54	14.10	10.86	9.300	4.882
1.83V	63.00	48.00	32.00	23.58	19.00	16.22	14.60	11.35	9.700	5.093
1.80V	70.00	52.00	33.20	24.24	19.38	16.60	15.00	11.64	10.00	5.251
1.75V	78.00	55.71	34.71	25.22	19.70	17.00	15.30	11.83	10.20	5.356
1.70V	86.00	57.51	35.71	25.71	20.04	17.20	15.50	11.93	10.30	5.407
1.65V	88.71	61.11	36.91	26.40	20.33	17.40	15.70	12.03	10.40	5.460
1.60V	92.51	63.20	38.31	27.51	20.90	17.70	15.90	12.12	10.50	5.513

#### Discharge Constant Power per Cell (Watts at 25° C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	94.19	74.89	53.15	40.41	33.48	29.10	26.30	20.76	18.14	9.522
1.87V	103.6	81.30	56.37	42.33	35.26	30.50	27.80	21.63	18.91	9.930
1.83V	116.1	88.63	60.00	44.52	37.00	31.70	28.70	22.41	19.59	10.29
1.80V	126.8	94.56	62.00	45.52	37.70	32.40	29.40	22.89	20.08	10.54
1.75V	137.6	98.78	64.00	46.93	38.19	33.20	29.90	23.18	20.37	10.69
1.70V	147.5	99.81	65.63	47.70	38.78	33.50	30.20	23.38	20.56	10.80
1.65V	150.0	104.2	67.44	48.78	39.30	33.80	30.50	23.57	20.66	10.85
1.60V	151.9	107.4	69.04	50.37	40.30	34.10	30.70	23.67	20.76	10.90

### Performance Characteristics



### Battery Discharge Capacity

Long time discharge capacity for solar/wind application						
Capacity	C24(Ah)	C48(Ah)	C72(Ah)	C100(Ah)	C120(Ah)	C240(Ah)
	F.V=1.85VPC					
Model						
<b>OPzV12-100</b>	111.3	125.0	125.8	122.0	129.6	131.8

**Note:** The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **CSBattery** for the latest information.

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