



GEL BATTERY OPzV Series

OPzV500 (2V 500Ah)



The battery is manufactured with PVC-SiO₂ separator and colloidal or fumed silica. The tubular positive plate and pasted negative plate is applied. The batteries use silica gel to immobilize the electrolyte inside the battery. The proven silica gel technology improves battery cycle life and performance at various ambient temperatures.

Battery Construction

COMPONENT	POSITIVE PLATE	NEGATIVE PLATE	CONTAINER	COVER	SAFETY VALVE	TERMINAL	SEPARATOR	ELECTROLYTE
Raw material	Tubular	Lead	ABS	ABS	Rubber	Copper	PVC-SiO ₂	Fumed Silicon

Performance Characteristics

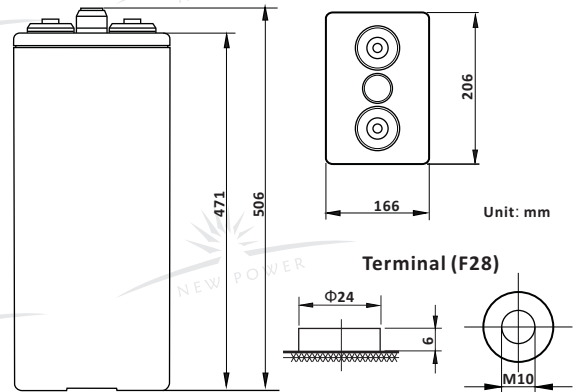
- **Nominal Voltage** 2V
- **Number of Cell** 1
- **Nominal Capacity (77°F / 25°C)**
 - 240 Hour rate (2.77A, 1.85V) 665Ah
 - 48 Hour rate (13A, 1.85V) 625Ah
 - 10 Hour rate (50A, 1.8V) 500Ah
 - 3 Hour rate (130A, 1.6V) 390Ah
- **Internal Resistance**
 - Fully charged battery (77°F / 25°C) 0.45mΩ
- **Operating Temperature Range**
 - Discharge -20 ~ 65°C
 - Charge -10 ~ 65°C
 - Store -20 ~ 65°C
- **Self-Discharge 68°F (20°C)**
 - Capacity declined per month 1.5%
- **Max. discharge current 77°F / 25°C** 2500A(5S)
- **Charge Methods: constant voltage charge 77°F / 25°C**
 - Cycle use 2.38 ~ 2.42V
 - Max. Current 75A
 - Standby use 2.23 ~ 2.27V

General Features

- **The battery has a long service life, under float charging, ambient temperature 25°C, it can operate 15-20 years.**
- **High cycle service life.**
- **Excellent recovery from deep discharge and good deep discharge cycle capability.**
- **The battery has a low self-discharge, keep over 60% of the rated capacity after 2 years stored under 20°C.**
- **Better temperature resistance performance.**
- **Excellent deep cycle performance.**
- **Superior low current discharge performance.**
- **Better high temperature performance.**
- **Stronger constant power discharge capability.**
- **Better charge reception capability.**
- **Better safety performance and reliability.**
- **Modular and personified installation design.**

Dimensions and Weight

Type	Length	Width	Height	Total Height	Approx. Weight
SI Units	206mm	166mm	471mm	506mm	38.5Kg
English Units	8.11inch	6.53inch	18.5inch	19.9inch	84.88lbs



Constant Current Discharge (Amperes at 77°F/25°C)

V/cell	15min	30min	1h	3h	5h	10h	24h	48h	120h
1.65	630	470	295	135	94.2	52.0	25.2	14.1	5.97
1.70	570	427	277	130	89.2	51.6	24.9	13.8	5.92
1.75	537	405	260	128	87.5	51.0	24.7	13.7	5.88
1.80	505	382	255	125	84.2	50.0	24.4	13.6	5.86
1.85	472	347	244	122	81.8	47.2	23.2	13.0	5.50

Constant Power Discharge (Watts at 77°F/25°C)

V/cell	15min	30min	1h	3h	5h	10h	24h	48h	120h
1.65	1228	995	586	267	188	103	50.4	28.1	11.9
1.70	1112	915	552	259	178	102	50.1	28.0	11.8
1.75	1048	790	517	255	173	101	49.7	27.7	11.6
1.80	985	745	507	249	166	99.2	48.7	27.0	11.5
1.85	922	677	487	243	162	94.2	46.2	25.8	10.9

(Note: The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.)



