



GEL BATTERY OPzV Series



OPzV420 (2V 420Ah)

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

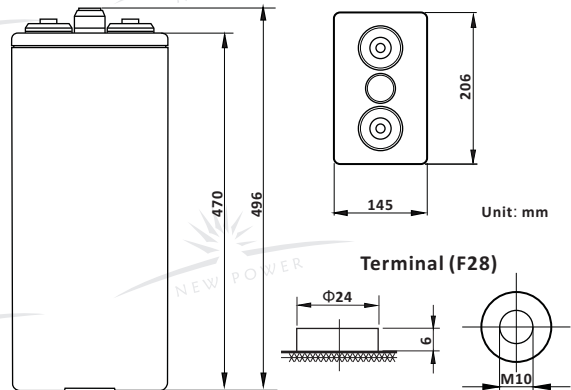
- **Nominal Voltage** 2V
- **Number of Cell** 1
- **Nominal Capacity (77°F /25°C)**
 - 240 Hour rate (2.32A, 1.85V) 558Ah
 - 48 Hour rate (10.9A, 1.85V) 523Ah
 - 10 Hour rate (42A, 1.8V) 420Ah
 - 3 Hour rate (105A, 1.6V) 315Ah
- **Internal Resistance**
 - Fully charged battery (77°F /25°C) 0.40mΩ
- **Operating 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** 1800A(5S)
- **Charge Methods: constant voltage charge 77°F /25°C**
 - Cycle use 2.38 ~ 2.42V
 - Max. Current 63.0A
 - Standby use 2.23 ~ 2.27V

Dimensions and Weight

Type	Length	Width	Height	Total Height	Approx. Weight
SI Units	206mm	145mm	471mm	506mm	33Kg
English Units	8.11inch	5.71inch	18.5inch	19.9inch	72.75lbs

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.**



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

V/cell	15min	30min	1h	3h	5h	10h	24h	48h	120h
1.65	529	395	248	113	79.1	43.8	21.1	11.8	5.02
1.70	479	359	233	109	74.7	43.3	20.9	11.7	4.98
1.75	451	340	218	107	73.6	42.8	20.8	11.5	4.94
1.80	424	321	214	105	70.9	42.0	20.5	11.4	4.92
1.85	397	291	205	103	68.7	39.7	19.5	10.9	4.64

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

V/cell	15min	30min	1h	3h	5h	10h	24h	48h	120h
1.65	1031	836	492	224	158	86.8	42.4	23.6	10.03
1.70	934	769	464	218	149	86.3	42.1	23.5	9.96
1.75	880	664	434	214	145	85.6	41.8	23.3	9.91
1.80	827	626	426	209	140	83.5	40.9	22.8	9.72
1.85	775	569	409	204	136	79.1	38.8	21.7	9.16

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



