OPzV Series
12V 1 OPzV 50 12V50Ah

Sacred Sun OPzV series are valve regulated lead-acid cells which use a combination of tubular positive plate woven gauntlets, pasted negative plate design and gel electrolyte using advanced filling techniques in production which assure superior service life and excellent battery reliability. The battery has excellent cyclic performance and charge acceptance ability. It can be used in high-low temperature environment and poor grid condition.

Benefits

- Very long life according to EUROBAT Classification
- 1500+ cycles at 80% DOD
- High rate discharge performance
- High gas recombination efficiency
- Maximum charge efficiency
- GEL state electrolyte prevents leakage and layering
- Low resistance PVC or PF micro-porous separator ensures low self-discharge rate
- Vertical installation

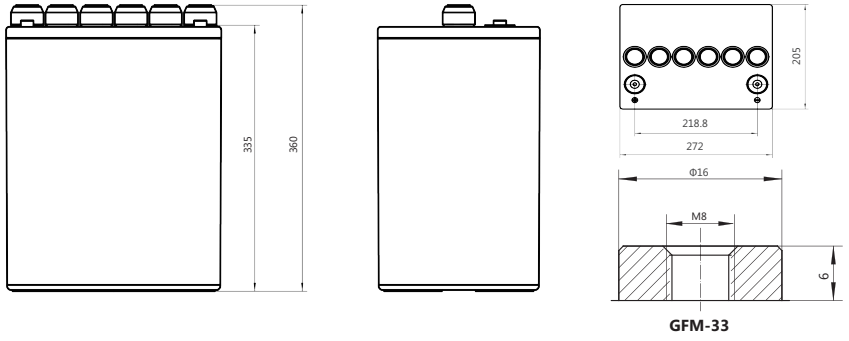
Applications

- Telecommunications
- Energy storage system
- Hybrid power system
- Power system
- UPS

Standards

- IEC 60896-21/22
- IEC 61427
- DIN 43539-T5
- DIN 40742
- EUROBAT guide

Drawing



GFM-33

Specifications

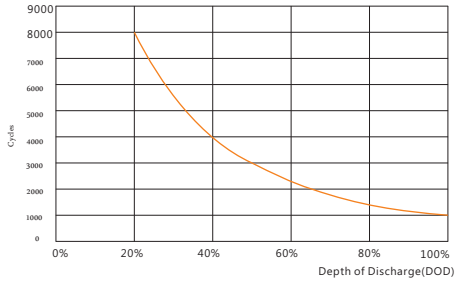
Battery Model	12V 1 OPzV 50			
Design Life (years, 25℃)	15			
Capacity (Ah, 25℃)	10HR (5A, 1.80V)	5HR (8.5A, 1.80V)	3HR (12.5A, 1.80V)	1HR (25A, 1.80V)
	50	42.5	37.5	25
Dimensions (mm)	Length	Width	Height	Total Height
	272	205	335	360
Approx. Weight (kg)	32.0			
Reference Internal Resistance (mΩ)	12.3 ±15% (fully charged @ 25℃Testing device: HIOKIBT3562)			
Maximum Discharge Current (A/3 Sec.)	345			
Self-Discharge (25℃)	⩽3% per month			
Charge Voltage (V/cell, 25℃)	Cycle use		Float use	
	2.35 (-3.5mV/℃/cell), max charge current: 10A		2.25 (-3.5mV/℃/cell)	
Short Circuit Current (A)	830			

Discharge Data

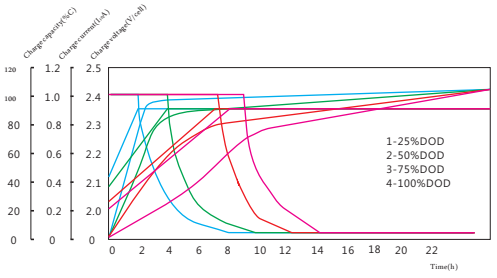
Constant Current Discharge Data (25℃, A)																		
End Voltage (V/cell)	min					h												
	5	10	15	20	30	1	2	3	5	6	8	10	20	24	48	100	120	240
1.65	76	68	59	52	44	29	18.9	14.7	9.6	8.4	6.6	5.8	3.0	2.57	1.31	0.65	0.55	0.28
1.70	71	64	55	50	42	28	17.8	14.0	9.3	8.1	6.4	5.5	2.9	2.53	1.30	0.64	0.54	0.27
1.75	68	61	54	48	40	26	16.8	13.2	8.9	7.8	6.1	5.3	2.8	2.50	1.28	0.62	0.53	0.27
1.80	64	58	51	45	39	25	15.9	12.5	8.5	7.4	5.9	5.0	2.6	2.34	1.24	0.61	0.52	0.26
1.85	60	55	48	43	36	24	15.1	11.8	8.2	7.2	5.6	4.7	2.5	2.25	1.20	0.59	0.51	0.26

Constant Power Discharge Data (25℃, W/cell)																		
End Voltage (V/cell)	min					h												
	5	10	15	20	30	1	2	3	5	6	8	10	20	24	48	100	120	240
1.65	125	123	113	105	86	57.5	37.5	29.5	19.2	16.8	13.3	11.7	6.0	5.15	2.64	1.29	1.09	0.56
1.70	116	114	106	96	83	55.5	35.3	28.1	18.6	16.1	12.7	11.0	5.8	5.07	2.59	1.27	1.07	0.55
1.75	106	104	98	90	78	52.5	33.4	27.6	17.8	15.5	12.3	10.5	5.6	4.98	2.55	1.24	1.05	0.54
1.80	96	95	86	79	70	50.0	31.8	24.9	16.9	14.8	11.7	10.0	5.3	4.68	2.48	1.22	1.03	0.53
1.85	93	80	73	69	60	47.5	30.1	23.6	16.3	14.3	11.1	9.3	5.1	4.49	2.39	1.18	1.01	0.51

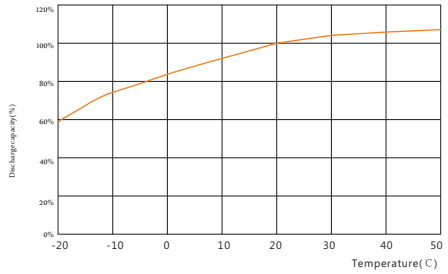
Performance Curve



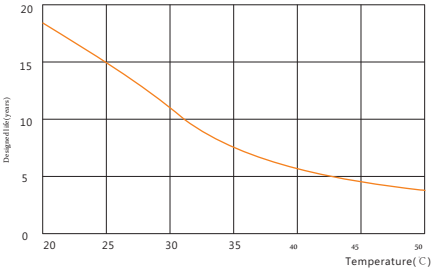
Cycle life vs. discharge depth



Charge vs. discharge depth



Capacity vs. temperature



Design life vs. temperature

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