

# SP Series

## SP12-50 12V50Ah

SP series VRLA battery uses AGM technology and high-purity raw materials. Its good floating back up and large current discharge performance makes it optimal and economical choice for UPS/EPS.



### Benefits

- Long life according to EUROBAT Classification
- Maximum charge efficiency
- High gas recombination efficiency
- Low self-discharge rate
- Easy installation and handling
- Vertical or horizontal installation

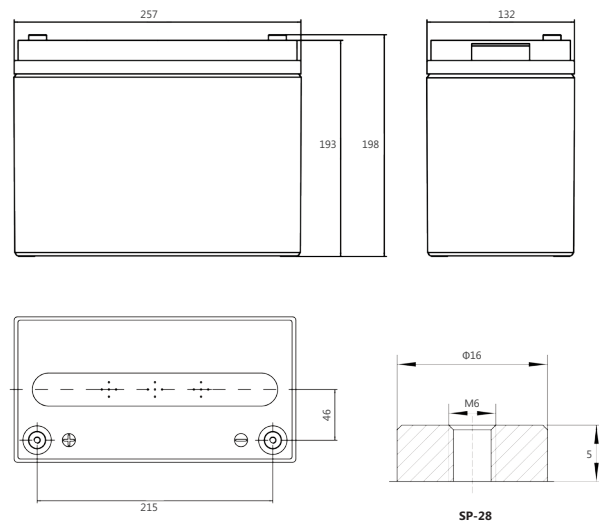
### Applications

- UPS units
- Emergency power
- Starting generators
- EPS units

### Standards

- IEC 60896-21/22
- JIS C8704-1/2
- EUROBAT guide

### Drawing



### Specifications

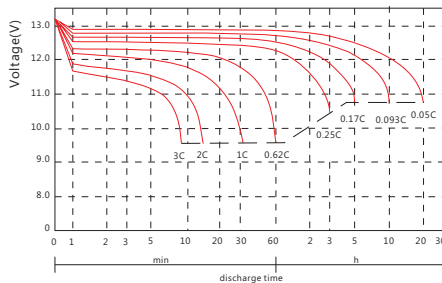
Battery Model	SP12-50			
Design Life (years, 25°C)	10			
Capacity (Ah, 25°C)	20HR (2.52A, 1.80V)	10HR (5.0A, 1.80V)	5HR (8.5A, 1.75V)	1HR(28.42A, 1.70V)
	50.4	50	42.5	28.42
Dimensions (mm)	Length	Width	Height	Total Height
	257	132	193	198
Approx. Weight (kg)	16.0			
Reference Internal Resistance (mΩ)	7.2 ( full charged @ 25°C)			
Maximum Discharge Current (A/5 Sec.)	750			
Self-Discharge (25°C)	≤2% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.40 (-3.5mV/°C/cell), max charge current: 15.0 A		2.27 (-3.5mV/°C/cell)	
Short Circuit Current (A)	1600			

## Discharge Data

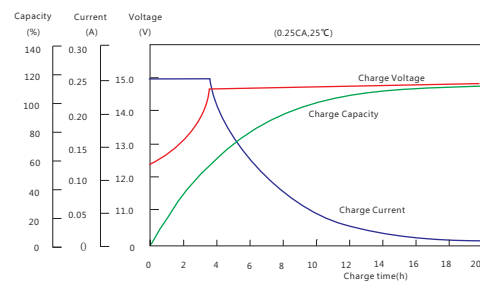
Constant Current Discharge Data (25°C, A)													
End Voltage (V/cell)	min						h						
	5	10	15	20	30	45	1	1.5	2	3	5	10	20
1.60	172.0	115.0	92.50	75.00	56.00	41.12	29.78	23.67	18.99	13.50	8.927	5.325	2.715
1.65	154.4	111.0	88.91	73.13	54.56	40.00	29.09	22.88	18.56	13.25	8.792	5.250	2.675
1.67	148.1	108.7	87.86	72.14	54.02	39.58	28.75	22.61	18.38	13.17	8.729	5.210	2.657
1.70	141.2	106.0	86.45	70.87	53.27	39.01	28.42	22.24	18.13	13.03	8.632	5.170	2.640
1.75	130.2	101.3	83.45	68.31	51.74	37.82	27.50	21.57	17.67	12.80	8.500	5.100	2.600
1.80	120.8	96.00	79.93	66.24	50.00	36.50	26.38	20.94	17.21	12.50	8.294	5.000	2.520

Constant Power Discharge Data (25°C, W/cell)													
End Voltage (V/cell)	min						h						
	5	10	15	20	30	45	1	1.5	2	3	5	10	20
1.60	290.0	206.8	159.5	139.0	111.9	81.50	61.74	48.72	37.75	26.52	18.50	10.92	5.655
1.65	275.2	198.9	156.3	135.9	109.2	78.95	59.70	47.63	36.96	25.90	18.20	10.69	5.540
1.67	271.4	196.1	155.2	134.4	107.8	78.17	59.02	47.13	36.54	25.63	17.93	10.59	5.491
1.70	266.5	192.5	153.4	132.3	105.9	77.08	58.03	46.44	35.97	25.31	17.59	10.42	5.435
1.75	256.1	186.1	149.6	129.2	102.8	74.60	56.27	45.00	34.58	24.45	16.90	10.25	5.280
1.80	245.0	177.4	145.7	125.5	97.83	71.94	54.17	43.50	33.40	23.56	16.50	9.890	5.100

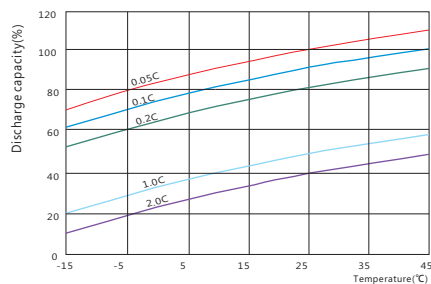
## Performance Curve



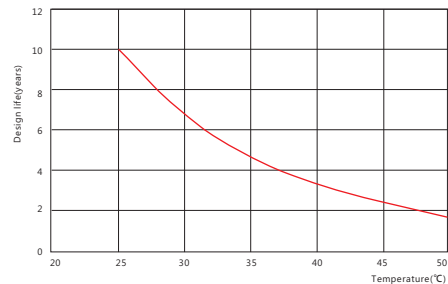
Discharge voltage vs. discharge time



Charge capacity vs. charge time



Discharge capacity vs. temperature



Design life vs. temperature

### Sacred Sun Power Sources Co., Ltd.

Add: No.1 Shengyang Road, Qufu 273100 PRC  
Tel: +86-537-4422313 Fax: +86-537-4411980  
Email: sales@sacredsun.cn

### Sacred Sun Hong Kong Co., Limited

Add: RM 19C Lockhart CTR 301-307 Lockhart RD Wan Chai, Hong Kong  
Email: admin.hk@sacredsun.hk

### Sacred Sun Asia Pacific Pte Ltd.

Add: 1 Ubi View, #04-12, Focus One, Singapore 408555  
Email: admin.sg@sacredsun.sg

### Sacred Sun Europe SARRL

Add: ZAE Fontaine, 33210 Fargues, France  
Email: admin.eu@sacredsun.eu

### Sacred Sun MEA FZE

Add: No. 311 office, Building LOB 14, JAFZA, Dubai, UAE  
Email: admin.ae@sacredsun.ae