



VISION Rechargeable Products
Sealed Lead Acid Battery

www.vision-batt.com

HP&HF Series

High Rate Discharge

The new VISION HP/HF series batteries are specially designed for applications where need high power output. By optimum design of battery grids and platepaste formula, the HP/HF series can deliver up to 40% more power than VISION standard CP/FM series.

Shenzhen Center power tech co., ltd has more than 15 year's experience in the manufacturing of VRLA batteries. SZCPT is one of the biggest manufacturers of SLA (or VRLA) batteries in the world, the biggest one in Mainland China and the first in China to develop and commercialize the sealed lead-acid battery with brand name VISION and has been at the forefront of battery technology from day one.

SZCPT leads the world in innovative battery technology. Our global network of sales and service engineers, backed in turn by our agents and distributors, means that we are currently active in more than 100 countries.

Shenzhen Center Power Tech. Co., Ltd

HP12-13W 12V 2.3Ah

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General Features

- Positive and negative plates in lead-calcium tinalloy
- Superior energy density
- Operates at a low internal pressure.
- Gas Recombination
- Usable in any orientation
- A recognized component of UL
- Very high power output
- Application specific designs
- A couple Range from 13W to 890W per cell for 10' @ 1.60Vpc
- Six months shelf life at 20°C
- Design life 5 years



Dimensions and Weight

	SI Units	English Units
Length	178mm	7.01inch
Width	35mm	1.38inch
Height	61mm	2.40inch
Total Height	67mm	2.64inch
Approx. Weight	0.99Kg	2.18lbs

Performance Characteristics

- Nominal Voltage 12V
- Number of cell 6
- Nominal Capacity 68°F(20°C)
10 min wattage @ 1.6V 13W/cell
- Nominal Capacity 77°F(25°C)
20 hour rate (0.12A, 10.5V) 2.30Ah
- Internal Resistance
Fully Charged battery 68°F(20°C) 36mOhms
- Self-Discharge
3% of capacity declined per month at 20°C(average)
- Operating Temperature Range
Discharge -20~60°C
Charge -10~60°C
Storage -20~60°C
- Max. Discharge Current 68°F(20°C) 34.5A(5s)
- Short Circuit Current 330A
- Charge Methods: Constant Voltage Charge 68°F(20°C)
Cycle use 14.5-14.9V
Maximum charging current 0.92A
Temperature compensation -30mV/°C
- Standby use 13.6-13.8V
Temperature compensation -20mV/°C



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Discharge Data

Constant Current Discharge Data (Amperes at 20°C)

End Voltage Per cell / V	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60	10.9	7.55	5.65	4.38	3.62	3.11	2.72	2.42	2.19	2.00	1.85	1.72	1.23	0.98	0.83	0.73	0.57	0.46	0.39	0.34	0.30	0.27	0.25	0.21	0.11
1.65	10.2	7.14	5.36	4.15	3.43	2.95	2.58	2.30	2.08	1.91	1.76	1.64	1.17	0.94	0.80	0.70	0.54	0.44	0.37	0.32	0.29	0.26	0.24	0.21	0.11
1.70	9.59	6.73	5.06	3.93	3.25	2.79	2.44	2.18	1.98	1.81	1.67	1.56	1.12	0.89	0.76	0.67	0.52	0.43	0.36	0.31	0.28	0.25	0.23	0.20	0.10
1.75	8.94	6.32	4.77	3.70	3.06	2.63	2.30	2.06	1.87	1.71	1.59	1.48	1.06	0.85	0.72	0.64	0.50	0.41	0.35	0.31	0.28	0.25	0.23	0.20	0.10
1.80	8.56	6.08	4.60	3.58	2.97	2.56	2.25	2.01	1.83	1.67	1.55	1.45	1.04	0.83	0.71	0.63	0.49	0.40	0.34	0.30	0.27	0.25	0.23	0.20	0.10

Constant Power Discharge Data (Watts per cell at 20°C)

End Voltage Per cell / V	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60	19.3	13.0	10.0	7.92	6.66	5.83	5.12	4.59	4.17	3.83	3.56	3.33	2.37	1.89	1.60	1.40	1.08	0.89	0.75	0.66	0.58	0.53	0.48	0.41	0.21
1.65	18.5	12.5	9.70	7.65	6.44	5.64	4.96	4.44	4.05	3.72	3.46	3.24	2.30	1.84	1.55	1.37	1.06	0.87	0.74	0.64	0.57	0.51	0.47	0.40	0.21
1.70	17.7	12.1	9.30	7.38	6.22	5.45	4.79	4.30	3.92	3.61	3.36	3.15	2.24	1.79	1.51	1.33	1.03	0.85	0.72	0.63	0.56	0.50	0.46	0.40	0.21
1.75	16.8	11.6	8.95	7.11	6.00	5.26	4.63	4.16	3.80	3.50	3.26	3.05	2.18	1.74	1.47	1.30	1.01	0.83	0.70	0.61	0.55	0.49	0.45	0.39	0.20
1.80	16.0	11.1	8.60	6.84	5.78	5.07	4.47	4.02	3.67	3.39	3.15	2.96	2.11	1.69	1.43	1.26	0.98	0.81	0.69	0.60	0.53	0.48	0.44	0.38	0.20

Performance Drawings

