



## VISION Rechargeable Products Sealed Lead Acid Battery

[www.vision-batt.com](http://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 plate paste 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

## HF12-650W-X 12V 150Ah

(Edition Jan 2014)

### General Features

- Positive and negative plates in lead-calcium tin alloy
- 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 1010W per cell for 10' @ 1.60Vpc
- Six months shelf life at 20°C
- Design life 10 years



### Dimensions and Weight

	SI Units	English Units
Length	482±2mm	19.0±2inch
Width	170±1mm	6.69±1inch
Height	240±2mm	9.45±2inch
Total Height	240±2mm	9.45±2inch
Approx. Weight	46.4Kg	102lbs

### Performance Characteristics

- Nominal Voltage 12V
- Number of cell 6
- Nominal Capacity 77°F(25°C)
  - 10 min wattage @ 1.6V650W/cell
  - 20 hour rate (7.86A, 10.5V) 157.2 Ah
- Nominal Capacity 77°F(25°C)
  - 10 hour rate (15.0A, 10.8V) 150Ah
- Internal Resistance
  - Fully Charged battery 77°F(25°C) ≤ 4.0mOhms
- 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 77°F(25°C) 1000A(5s)
- Charge Methods: Constant Voltage Charge 77°F(25°C)
  - Cycle use 2.40-2.45VPC
  - Maximum charging current 45A
  - Temperature compensation -30mV/°C
- Standby use 2.20-2.30VPC
  - Temperature compensation -20mV/°C



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## Discharge Data

Constant Current Discharge Data ( Amperes at 25°C )												
End Voltage Per cell / V	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	
1.60	365	306	256	226	206	181	162	148	135	124	115	
1.65	346	290	243	215	196	172	154	140	128	118	110	
1.70	326	274	230	203	185	163	146	133	122	112	105	
1.75	306	258	216	191	175	154	138	126	115	107	99.3	
1.80	294	249	210	186	170	150	135	123	113	104	97.1	

Constant Power Discharge Data ( Watts per cell at 25°C )												
End Voltage Per cell / V	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	
1.60	650	550	457	402	365	324	294	270	246	226	210	
1.65	626	530	442	389	353	314	285	262	239	220	204	
1.70	602	511	426	376	342	304	276	254	232	214	199	
1.75	577	492	411	362	330	294	267	246	225	207	193	
1.80	553	473	396	349	318	284	258	238	218	201	187	

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values. All data shall be changed without notice, Vision reserves the right to explain and update the information contained hereinto.

## Performance drawings

