

HA12-5.4P (12V-5.4AH)



Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	20W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 1.70 Kg (Tolerance±4.0%)
Internal Resistance	Approx. 30 mΩ
Terminal	F1/F2
Max. Discharge Current	50A (5 sec)
Short Circuit Current	275A
Design Life	Could Reach 8 years
Recommended Maximum Charging Current	1.5 A
Reference Capacity	C10 4.6AH C20 5.4AH
Standby Use Voltage	13.7 V~13.9 V @ 25°C
Cycle Use Voltage	14.6 V~14.8 V @ 25°C
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C±5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using.
Constainer Material	A.B.S. UL94-HB, UL94-V0 Optional.



The **HP (High Rate)** series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service.

By using strong grids and specially designed active material the **HP** series is with lower I.R, lower self discharge rate, high power, and longer service life performance.

Generally the **HP** series offers 30% more power output than the standard range. Suitable for high power standby and cycling situation, such as UPS, datacenter, electric tools, etc.



Dimensions

Length	90±1mm (3.54 inches)
Width	70±1mm (2.76 inches)
Height	101±1mm (3.98 inches)
Total Height	106±1mm (4.17 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

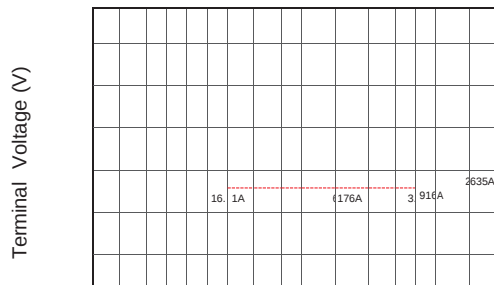
Constant Current Discharge Characteristics : A (25°C)

F.V/Tim e	3 MIN	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60 V	22.98	19.98	16.61	14.66	11.33	9.173	6.716	3.916	2.854
1.67 V	21.27	18.49	15.59	13.75	10.74	8.556	6.402	3.732	2.717
1.70 V	20.38	17.72	15.04	13.26	10.41	8.230	6.221	3.625	2.635
1.75 V	19.25	16.74	14.29	12.45	9.92	8.005	6.045	3.565	2.576
1.80 V	18.11	15.74	13.53	11.63	9.43	7.767	5.860	3.495	2.514
1.85 V	16.90	14.69	12.73	10.79	8.889	7.496	5.644	3.411	2.439

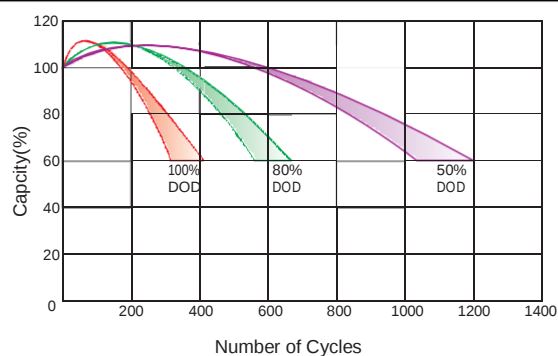
Constant Power Discharge Characteristics : WPC (25°C)

F.V/Tim e	3 MIN	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60 V	41.6	36.2	30.5	27.1	21.1	16.9	12.4	7.2	5.3
1.67 V	38.9	33.8	28.9	25.7	20.2	15.9	11.9	7.0	5.1
1.70 V	37.7	32.8	28.2	25.0	19.8	15.5	11.7	6.8	5.0
1.75 V	36.1	31.4	27.2	23.8	19.1	15.2	11.5	6.8	4.9
1.80 V	34.4	29.9	26.1	22.6	18.4	15.0	11.3	6.8	4.9
1.85 V	32.8	28.5	25.0	21.4	17.7	14.8	11.1	6.8	4.8

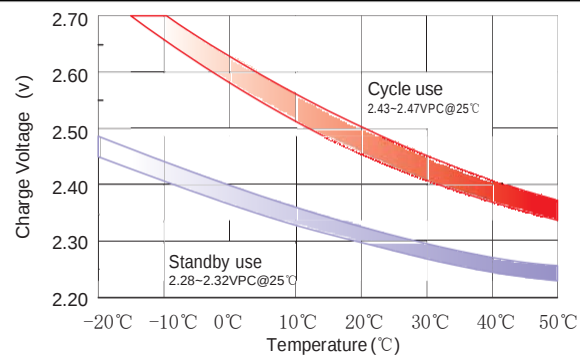
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.



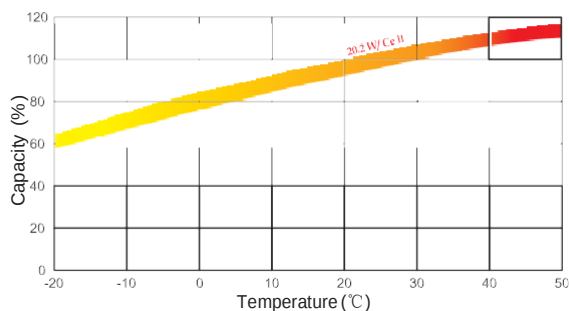
Cycle Life In Relation To Depth Of Discharge



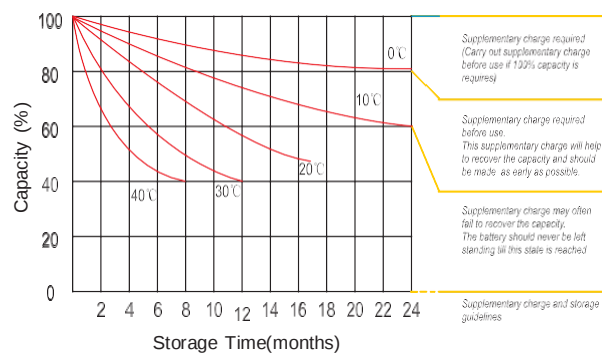
Relationship Between Charging Voltage And Temperature



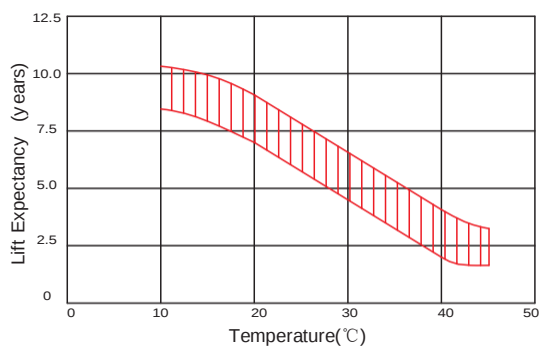
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

