

## HP12-9B (36W)

### Specification



Cells Per Unit	6
Voltage Per Unit	12
Capacity	36W @ 15min-rate to 1.67V per cell @ 25°C
Weight	Approx. 2.60 Kg (Tolerance ± 4.0%)
Internal Resistance	Approx. 18 mΩ
Terminal	F2
Max. Discharge Current	90A (5 sec)
Short Circuit Current	450A
Design Life	Could Reach 8 years
Recommended Maximum Charging Current	2.7 A
Reference Capacity	C10 8.5AH C20 9.0AH
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.

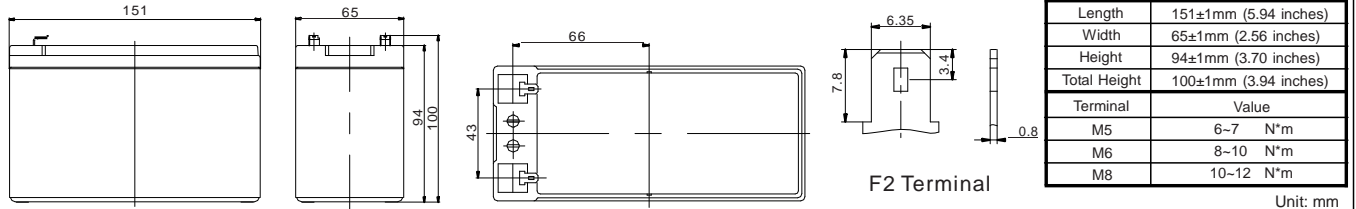
The new **HP (High Rate)** series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service.

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



#### Constant Current Discharge Characteristics: A(25°C)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	1HR	1.5HR	2HR	3HR	4HR
9.60V	41,37	35,97	29,91	26,39	20,40	16,51	12,09	7,049	5,137	3,530	2,357	1,824
10.0V	38,28	33,29	28,05	24,76	19,33	15,40	11,52	6,718	4,891	3,459	2,313	1,798
10.2V	36,69	31,90	27,07	23,86	18,74	14,81	11,20	6,525	4,744	3,422	2,293	1,780
10.5V	34,65	30,13	25,71	22,41	17,86	14,41	10,88	6,417	4,638	3,378	2,272	1,754
10.8V	32,59	28,34	24,36	20,94	16,97	13,98	10,55	6,291	4,525	3,350	2,246	1,694
11.1V	30,41	26,45	22,91	19,42	16,00	13,49	10,16	6,140	4,390	3,284	2,202	1,669

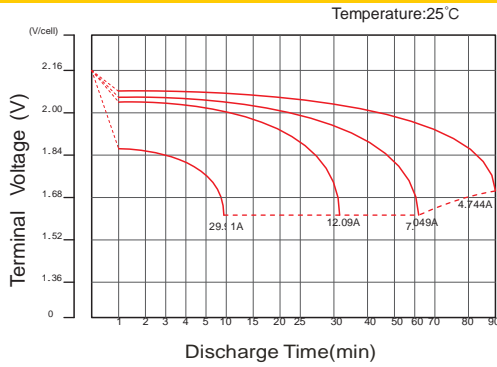
#### Constant Power Discharge Characteristics: W(25°C)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	1HR	1.5HR	2HR	3HR	4HR
9.60V	449,5	390,9	329,7	292,7	227,6	182,1	133,6	78,22	57,22	44,26	28,18	21,83
10.0V	420,0	365,2	312,3	277,3	217,9	171,5	128,6	75,27	55,01	43,67	27,72	21,52
10.2V	407,3	354,2	305,0	270,4	213,6	166,9	126,4	73,97	53,99	43,29	27,48	21,32
10.5V	389,6	338,7	293,4	257,1	206,2	164,4	124,4	73,67	53,45	42,83	27,28	21,03
10.8V	371,7	323,2	282,0	243,9	198,7	161,8	122,4	73,26	52,91	42,52	26,96	20,32
11.1V	353,9	307,7	270,5	230,6	191,2	159,4	120,2	72,97	52,37	41,03	26,43	20,03

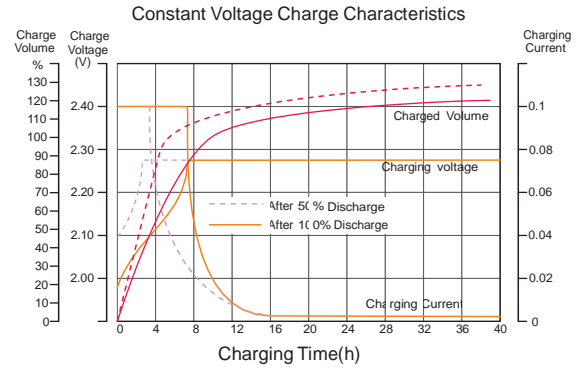
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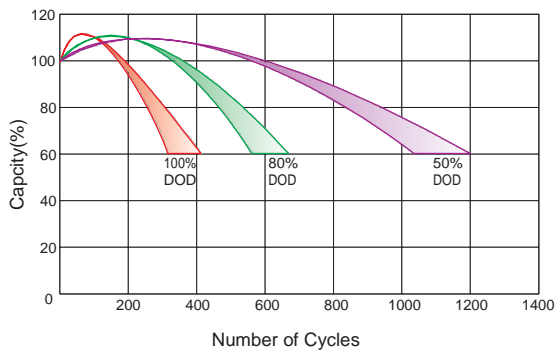
## Discharge Characteristics Curve



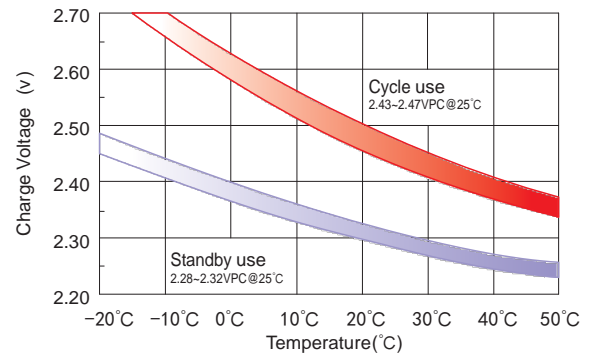
## Charge Characteristic Curve For Standby Use



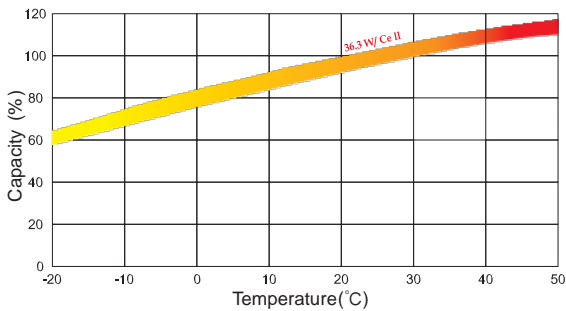
## Cycle Life In Relation To Depth Of Discharge



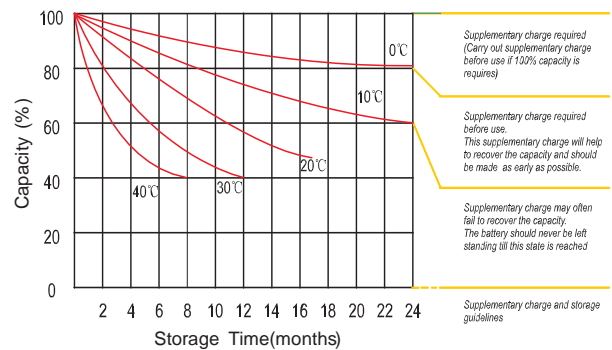
## Relationship Between Charging Voltage And Temperature



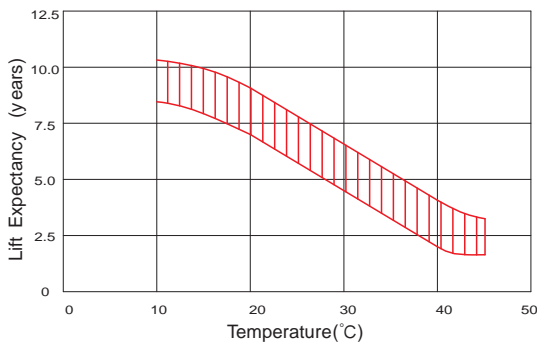
## Temperature Effects On Capacity



## Storage Characteristics



## Effect Of Temperature On Long Term Life



## Life Characteristics Of Standby Use

