

HA12-40P (12V-40Ah/150W)



Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	150W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 13.0 Kg (Tolerance±3.0%)
Internal Resistance	Approx. 7.5 mΩ
Terminal	F11(M6)
Max. Discharge Current	400A (5 sec)
Short Circuit Current	1100A
Design Life	Could Reach 15 years
Recommended Maximum Charging Current	12 A
Reference Capacity	C10 37.8AH C20 40.0AH
Standby Use Voltage	13.6 V~13.8 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 15 years design life (EUROBAT CLASSIFICATION), 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, electril tools, etc.



Dimensions

Length	198±1mm (7.80 inches)
Width	166±1mm (6.54 inches)
Height	169±1mm (6.65 inches)
Total Height	169±1mm (6.65 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/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	141.4	121.1	108.9	86.5	69.5	50.9	29.3	21.7
1.67V	130.8	113.6	102.2	82.0	64.8	48.6	27.9	20.7
1.70V	125.4	109.6	98.5	79.5	62.4	47.2	27.1	20.0
1.75V	118.4	104.1	92.5	75.8	60.6	45.9	26.7	19.6
1.80V	111.4	98.6	86.4	72.0	58.9	44.5	26.1	19.1
1.85V	104.0	92.7	80.1	67.9	56.8	42.8	25.5	18.5

Constant Power Discharge Characteristics : WPC (25°C)

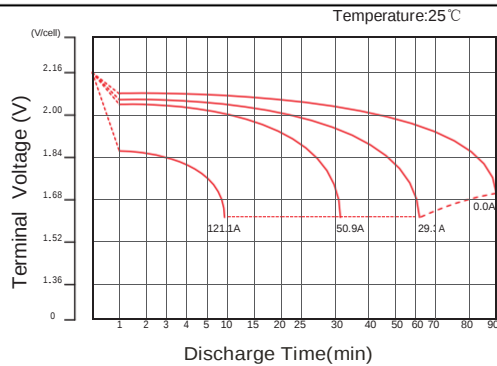
F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	252	219	198	158	128	93.8	54.2	40.3
1.67V	236	208	188	152	120	90.3	52.1	38.7
1.70V	229	203	183	149	117	88.8	51.2	38.0
1.75V	219	195	174	144	115	87.4	51.0	37.6
1.80V	209	187	165	138	114	85.9	50.7	37.2
1.85V	199	180	156	133	112	84.5	50.5	36.9

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

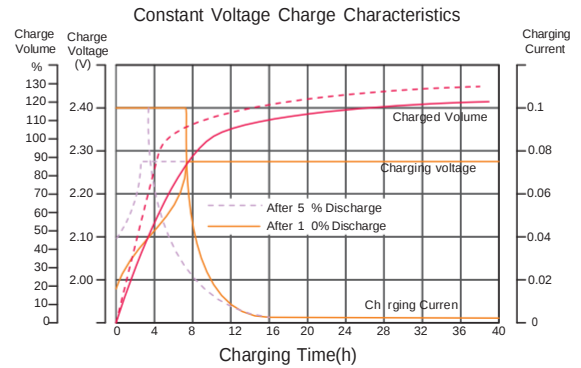
HA12-40P (140Ah/150W)



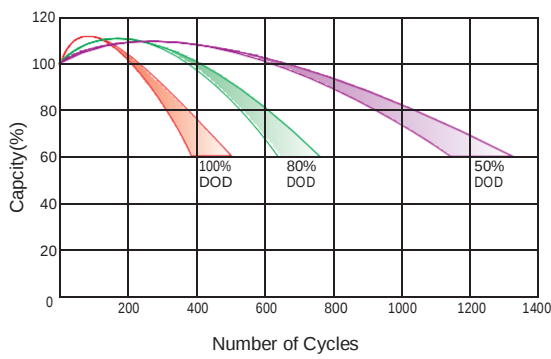
Discharge Characteristics Curve



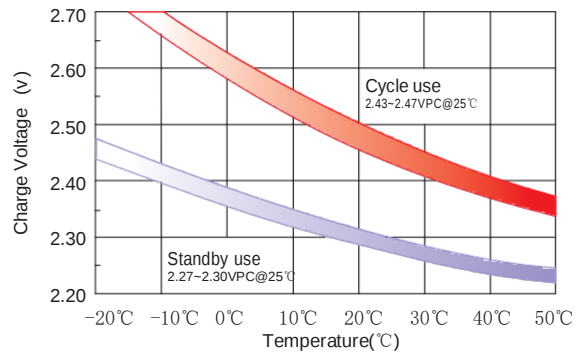
Charge Characteristic Curve For Standby Use



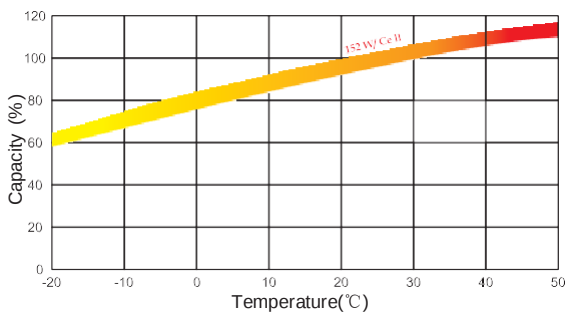
Cycle Life In Relation To Depth Of Discharge



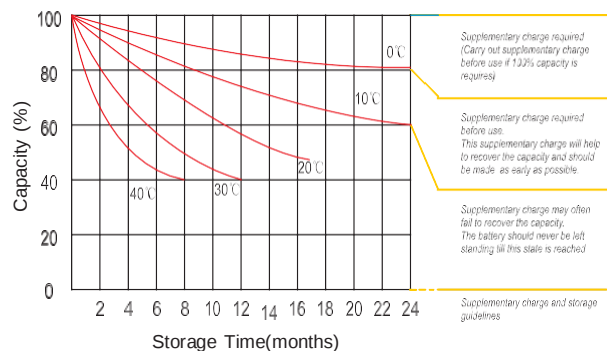
Relationship Between Charging Voltage And Temperature



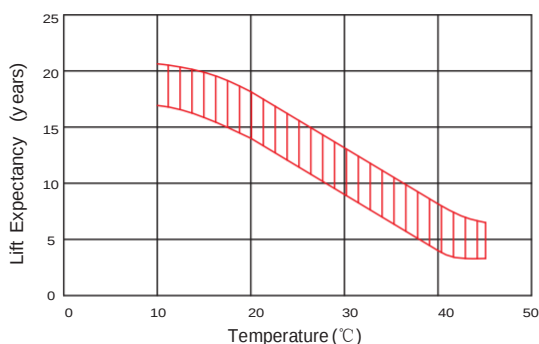
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

