

HR12-400

12 volt 400watts/cell @15 min/100ah @ 20 hour rate

Specification

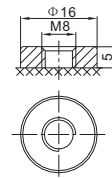
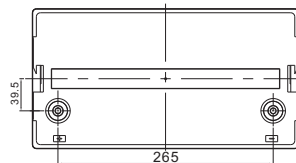
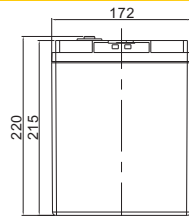
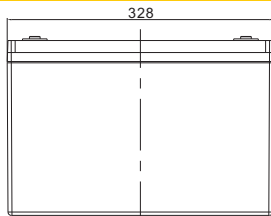
Cells Per Unit	6
Voltage Per Unit	12
Capacity	400 W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 32.0 Kg (Tolerance ±2.0%)
Internal Resistance	Approx. 4.0 mΩ
Terminal	F12(M8)
Max. Discharge Current	1000A (5 sec)
Short Circuit Current	2350A
Design Life	Could Reach 15 years
Recommended Maximum Charging Current	30 A
Reference Capacity	C10 94.4AH C20 100.0AH
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	RITAR 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 HR (High Rate) series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 15 years design life in float service. By using strong grids and specially designed active material the HR series is with lower I.R, lower self discharge rate, high power, and longer service life performance. Generally the HR series offers 30% more power output than the standard range. Suitable for high power standby and cycling situation, such as UPS, datacenter, electric tools et al.



Dimensions



F12 Terminal

Length	328±1mm (12.9 inches)
Width	172±1mm (6.77 inches)
Height	215±1mm (8.46 inches)
Total Height	220±1mm (8.66 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	355.3	304.2	273.6	217.4	174.6	128.0	73.6	54.5
1.67V	328.7	285.4	256.7	206.0	162.9	122.0	70.1	51.9
1.70V	315.1	275.3	247.5	199.7	156.7	118.6	68.1	50.3
1.75V	297.6	261.6	232.4	190.3	152.4	115.2	67.0	49.2
1.80V	279.9	247.8	217.2	180.8	147.9	111.7	65.7	48.0
1.85V	261.2	233.0	201.3	170.5	142.7	107.6	64.1	46.6

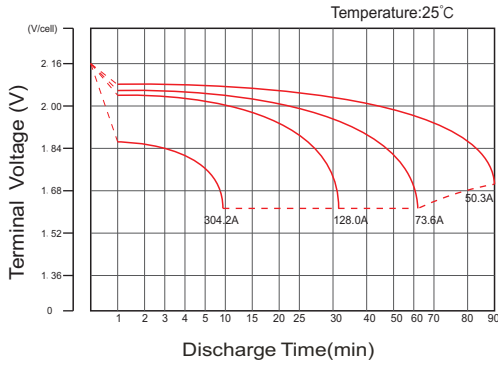
Constant Power Discharge Characteristics : WPC (25°C)

F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	634	551	498	412	321	236	136	101
1.67V	592	521	472	401	302	227	131	97.3
1.70V	574	509	460	394	294	223	129	95.4
1.75V	549	490	438	381	290	220	128	94.5
1.80V	524	471	415	368	285	216	127	93.5
1.85V	499	452	393	354	281	212	127	92.6

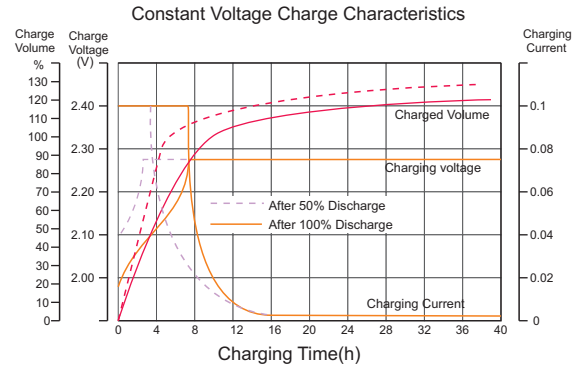
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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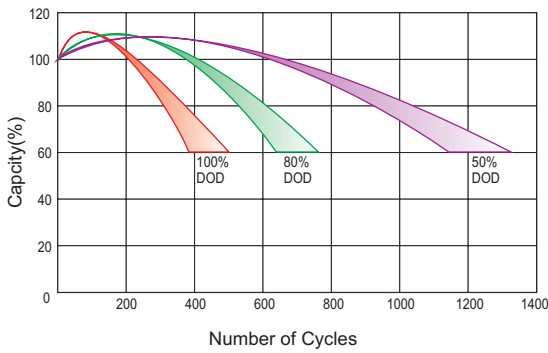
Discharge Characteristics Curve



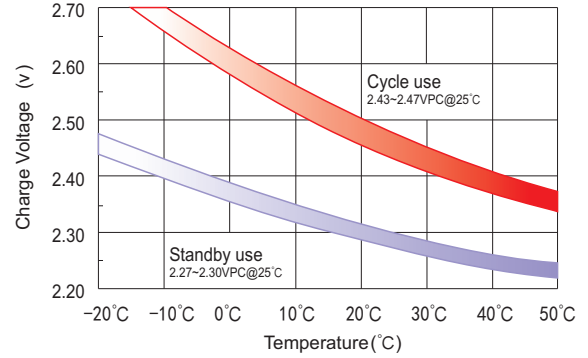
Charge Characteristic Curve For Standby Use



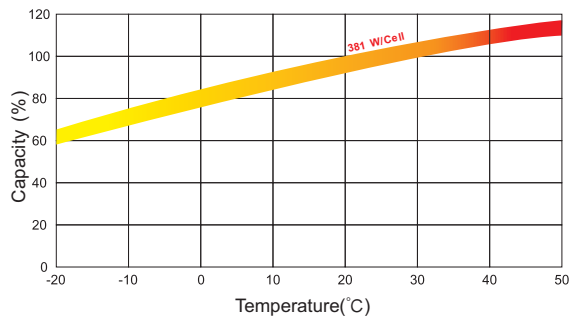
Cycle Life In Relation To Depth Of Discharge



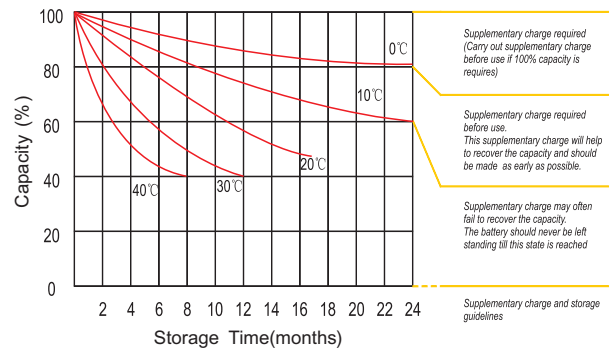
Relationship Between Charging Voltage And Temperature



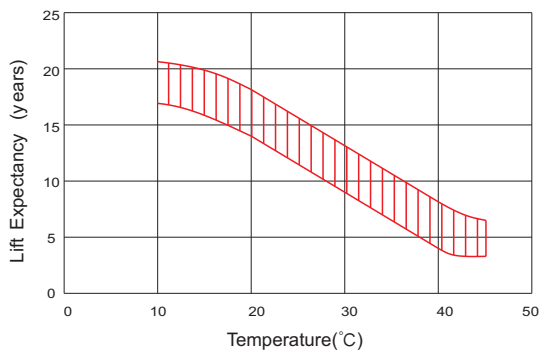
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

