



# EV12-280(12V280Ah)



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	280Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 78.0 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 3.0 mΩ
Terminal	F14(M8)
Max. Discharge Current	2800A (5 sec)
Cold Cranking Ampere(CCA)	980A
Maxi. Charging Current	84.0A
Reference Capacity	C3 204.6AH
	C5 230.5AH
	C10 264.0AH
	C20 280.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
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 charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



EV ( Electric Vehicle ) series is specially designed for frequent discharge deep cycle application. By using the specially designed active material, strong grids and thick plate construction, the EV series battery offers reliable performance in high load situations and could provide competitive cycle performance. It is suitable for Electric Vehicle and Golf cart, Floor Machines, Forklifts, Aerial lifts, Robotics, Marine, RV, Mobility and Medical Equipment, and most outdoor application.



ISO 9001

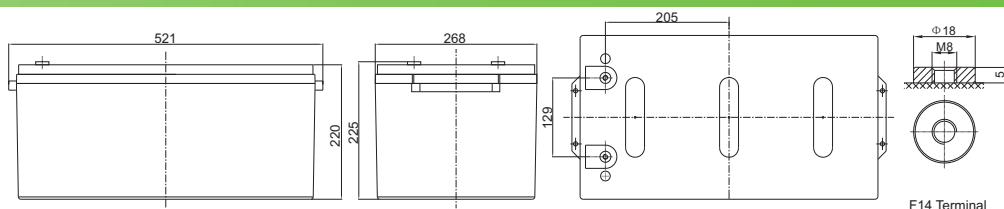


ISO 14001



OHSAS 18001

## Dimensions



Length	521±2mm (20.5 inches)
Width	268±2mm (10.6 inches)
Height	220±2mm (8.66 inches)
Total Height	225±2mm (8.86 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	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	504.3	295.0	163.0	96.2	74.6	58.6	49.9	33.5	27.9	14.6
1.65V	482.2	283.2	157.4	93.2	72.3	57.0	48.6	33.1	27.5	14.3
1.70V	451.6	270.7	152.3	90.1	70.3	55.5	47.3	32.6	27.1	14.2
1.75V	420.3	258.7	146.7	86.9	68.2	54.0	46.1	32.2	26.8	14.0
1.80V	388.1	247.3	141.1	83.8	66.1	52.5	44.9	31.6	26.4	13.9
1.85V	322.0	213.0	126.5	76.8	61.1	48.8	41.9	29.7	24.9	13.2

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

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	881.7	535.8	306.3	182.4	142.4	112.5	96.1	65.5	54.8	28.7
1.65V	855.4	519.8	297.5	177.4	138.6	109.9	94.0	64.9	54.2	28.3
1.70V	813.2	501.8	289.6	172.5	135.4	107.3	91.9	64.0	53.4	28.0
1.75V	767.7	484.6	280.7	167.3	131.9	104.9	89.9	63.2	52.8	27.7
1.80V	718.9	467.8	271.5	162.1	128.4	102.3	87.9	62.3	52.2	27.4
1.85V	605.0	406.9	245.0	149.3	119.2	95.4	82.2	58.6	49.2	26.1

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

The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.



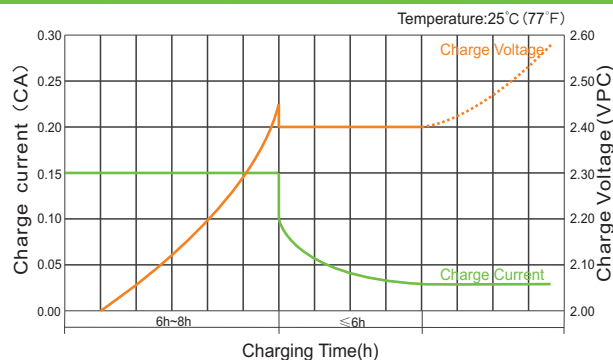
# EV12-280(12V280Ah)



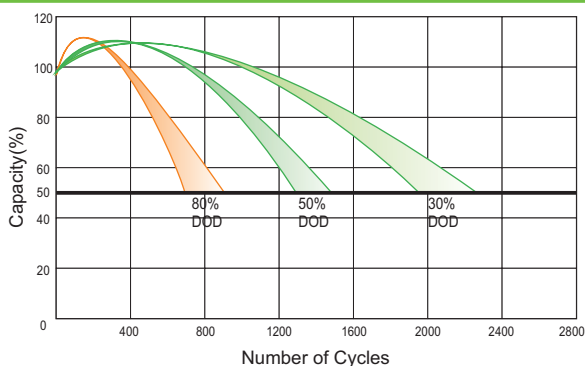
## Charge Characteristic Curve for Cycle Use(IUUU)



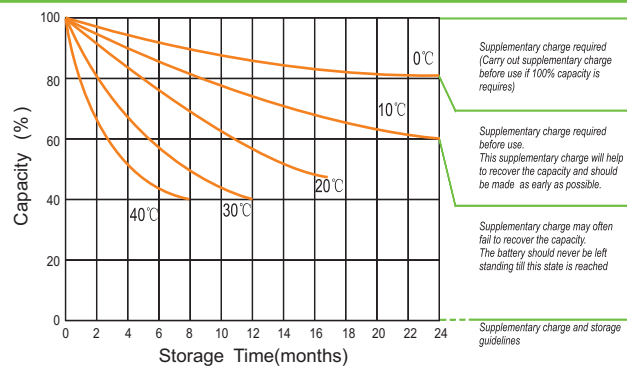
## Charge Characteristic Curve For Cycle Use(III)



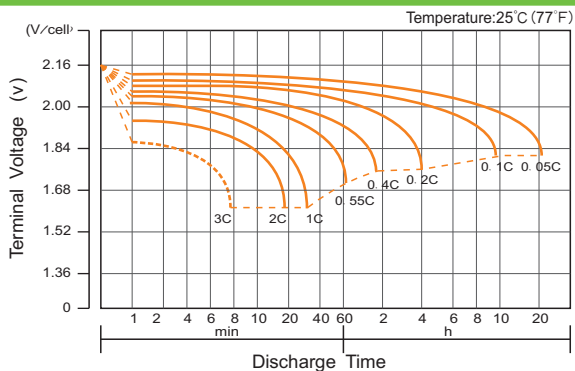
## Cycle Life in Relation to Depth of Discharge



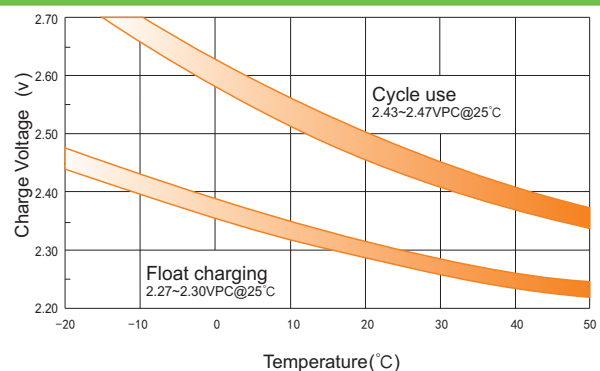
## Storage Characteristics



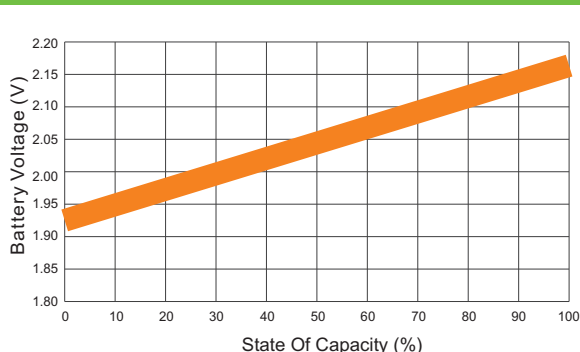
## Discharge Characteristics Curve



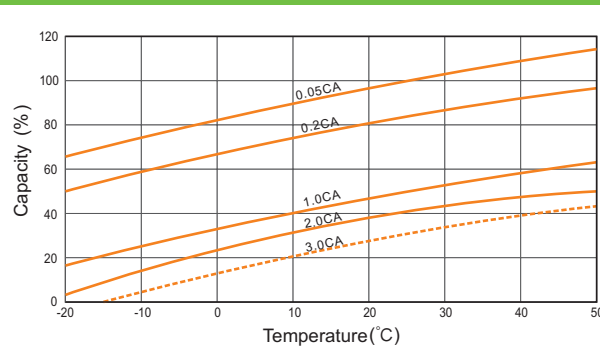
## Relationship Between Charging Voltage and Temperature



## Relationship of OCV And State of Charge(20°C)



## Temperature Effects on Capacity



(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.