



# EV12-145(12V145Ah)



## Specification

Cells Per Unit	6
Voltage Per Unit	12V
Capacity	145Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 44.0 Kg (Tolerance ±5%)
Internal Resistance	≤4.0 mΩ (Full Charge Condition @25°C)
Terminal	Default F12(M8), F5(M8) Optional
Max. Discharge Current	1450A (5 sec)
Cold Cranking Ampere(CCA)	715A
Maxi. Charging Current	43.5A
Reference Capacity	C <sub>3</sub> 108.6Ah
	C <sub>5</sub> 123.0Ah
	C <sub>10</sub> 138.0Ah
	C <sub>20</sub> 145.0Ah
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

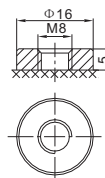
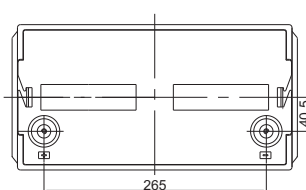
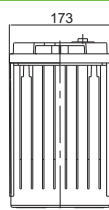
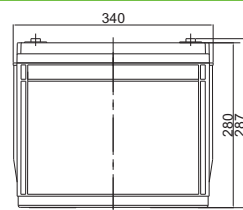


ISO 14001



ISO 45001

## Dimensions



F12 Terminal

Length	340±2mm (13.4 inches)
Width	173±2mm (6.81 inches)
Height	280±2mm (11.0 inches)
Total Height	287±2mm (11.3 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	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	331.2	263.1	160.3	88.6	52.5	40.9	32.1	27.4	18.0	14.5	7.55
1.65V	313.0	251.5	153.9	85.6	50.9	39.6	31.3	26.6	17.8	14.4	7.43
1.70V	288.2	235.6	147.1	82.8	49.2	38.6	30.4	25.9	17.5	14.1	7.34
1.75V	263.8	219.2	140.6	79.7	47.5	37.4	29.6	25.3	17.3	14.0	7.25
1.80V	238.8	202.4	134.4	76.7	45.8	36.2	28.8	24.6	17.0	13.8	7.18
1.85V	195.1	168.0	115.8	68.8	41.9	33.5	26.8	23.0	15.9	13.0	6.81

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

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	563.1	459.9	291.2	166.5	99.6	78.1	61.7	52.7	35.1	28.6	14.9
1.65V	542.3	446.2	282.5	161.7	96.9	76.0	60.3	51.5	34.8	28.3	14.7
1.70V	508.4	424.1	272.8	157.4	94.2	74.3	58.8	50.4	34.3	27.9	14.5
1.75V	473.8	400.4	263.4	152.6	91.3	72.4	57.5	49.3	33.9	27.5	14.3
1.80V	436.4	375.0	254.3	147.6	88.5	70.4	56.1	48.2	33.4	27.2	14.2
1.85V	363.0	315.6	221.2	133.2	81.5	65.4	52.3	45.1	31.4	25.7	13.5

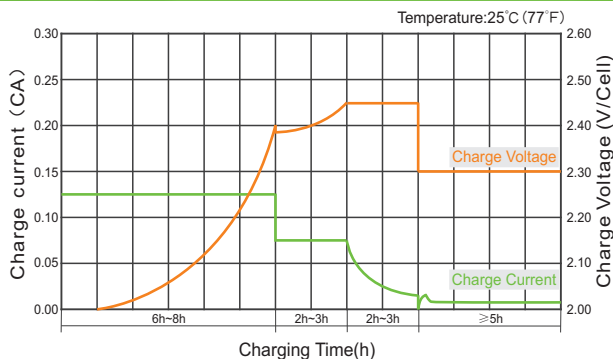
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.



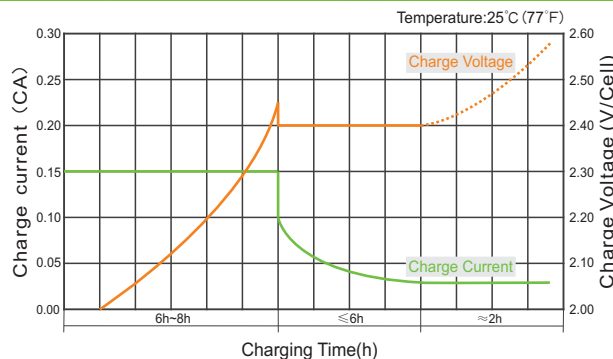
# EV12-145(12V145Ah)



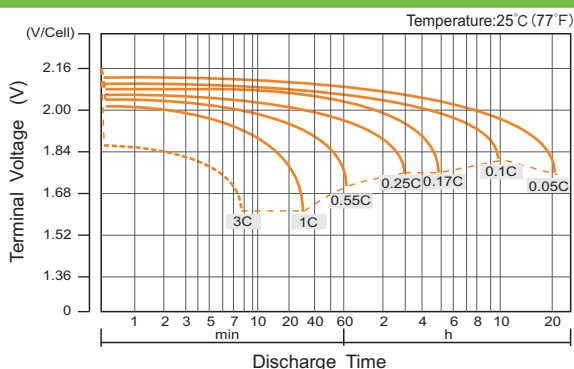
## Charge Characteristic Curve for Cycle Use(IUUU)



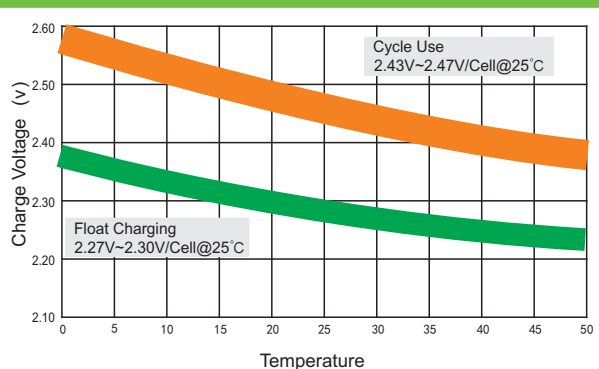
## Charge Characteristic Curve For Cycle Use(IUI)



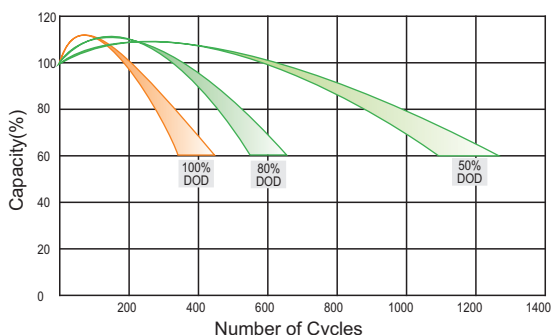
## Discharge Characteristics Curve



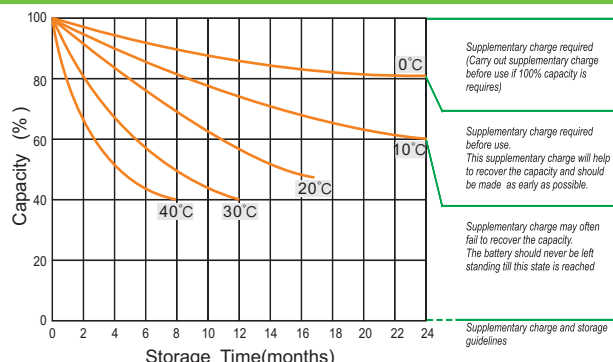
## Relationship Between Charging Voltage and Temperature



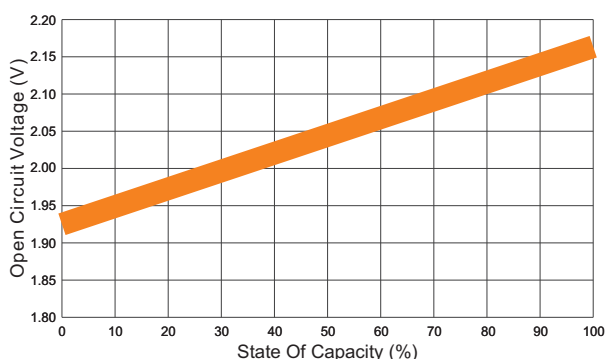
## Cycle Life in Relation to Depth of Discharge



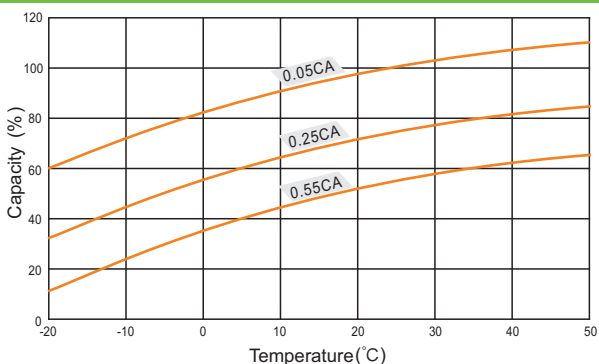
## Storage Characteristics



## 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.