



# EV12-180 (12V 180Ah)

Specifications	
Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	180Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 53.0 Kg (Tolerance±3.0%)
Dimensions	Length 532 mm
	Width 207 mm
	Height 214 mm
	Total Height 219 mm
Internal Resistance	Approx. 4.0 mΩ
Terminal	T11
Layout	4
Max. Discharge Current	1800A (5 sec)
Cold Cranking Ampere (CCA)	780A
Max. Charging Current	54.0A
Reference Capacity	C3 138.0AH
	C5 157.0AH
	C10 180.0AH
	C20 190.8AH
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 Temp. Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Nominal Operating Temp. 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 charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



## Description and Features

VRLA EV Series is specially designed for frequent discharge in deep cycle applications. EV batteries offer reliable performance in high load situations and have a high cycle durability due to the specially designed active material, strong grids and thick plate construction. The addition of carbon ensures faster full recharging of the battery and longer battery life. This stable and durable battery is completely sealed and maintenance free.

## Features

- Absorbent Glass Mat technology
- Long service life – 50% more cycles than VRLA AGM
- Faster full recharging – quick use of application
- Suitable for (deep) cycle applications

Layout	Terminal	UL certification

Constant Current Discharge Characteristics: A (25°C)											
F.V/Time	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
1.60V	411.2	326.6	199.0	106.6	64.9	50.3	39.9	34.0	22.8	19.0	9.93
1.65V	388.6	312.2	191.1	103.0	62.9	48.8	38.9	33.1	22.6	18.8	9.78
1.70V	357.7	292.4	182.7	99.6	60.8	47.4	37.8	32.2	22.2	18.5	9.66
1.75V	327.4	272.1	174.6	96.0	58.7	46.0	36.8	31.4	21.9	18.2	9.54
1.80V	296.4	251.3	166.9	92.3	56.6	44.6	35.8	30.6	21.6	18.0	9.44
1.85V	242.2	208.5	143.7	82.8	51.8	41.2	33.3	28.6	20.2	16.9	8.97

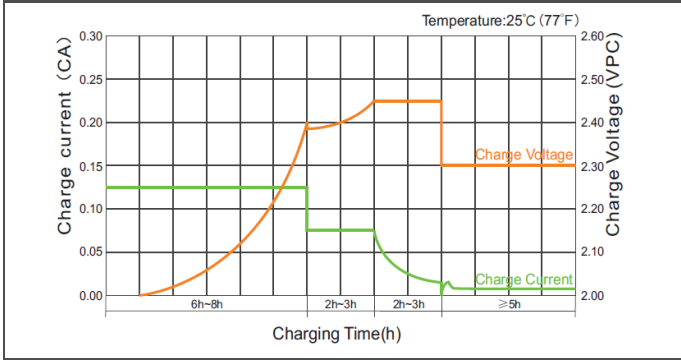
Constant Power Discharge Characteristics: Wpc (25°C)											
F.V/Time	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
1.60V	699.0	570.9	361.5	200.4	123.1	96.1	76.7	65.5	44.6	37.3	19.6
1.65V	673.2	553.9	350.7	194.6	119.7	93.5	74.9	64.1	44.2	36.9	19.3
1.70V	631.2	526.5	338.6	189.5	116.4	91.4	73.1	62.6	43.6	36.4	19.1
1.75V	588.1	497.1	327.0	183.7	112.9	89.0	71.5	61.2	43.1	36.0	18.9
1.80V	541.7	465.5	315.7	177.7	109.4	86.6	69.7	59.9	42.5	35.6	18.7
1.85V	450.6	391.8	274.6	160.3	100.8	80.4	65.0	56.0	40.0	33.5	17.8

(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 C10 should reach 95% after the first cycle and 100% after the third cycle.

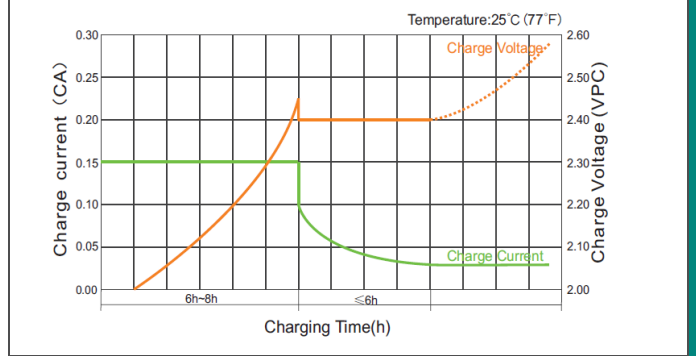


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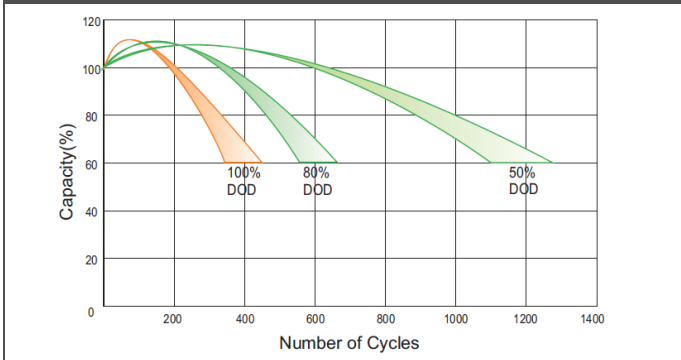
Charge Characteristic Curve For Cycle Use (IIUU)



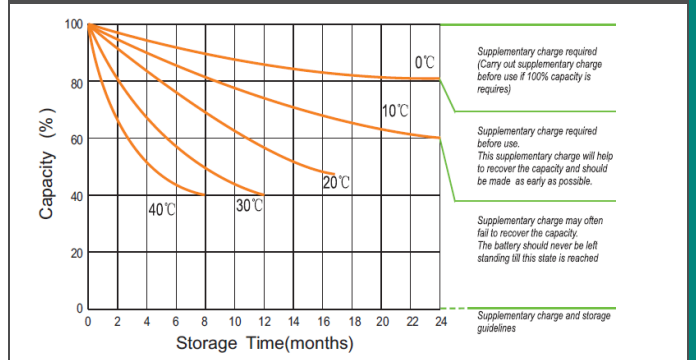
Charge Characteristic Curve For Cycle Use (IUI)



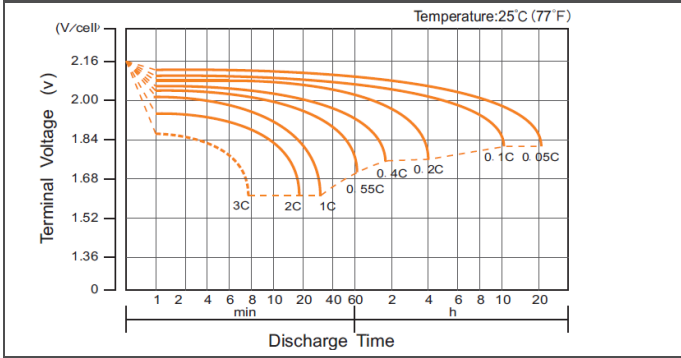
Cycle Life In Relation To Depth Of Discharge



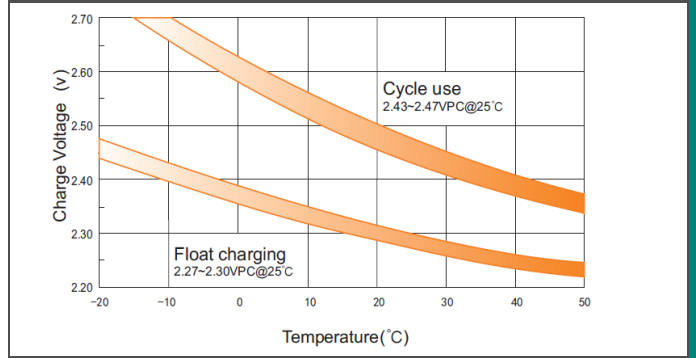
Storage Characteristics



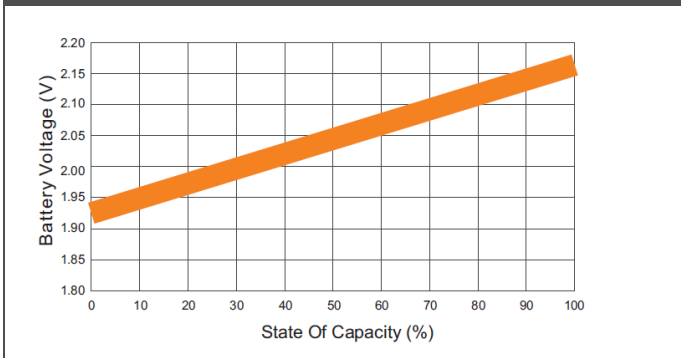
Discharge Characteristics Curve



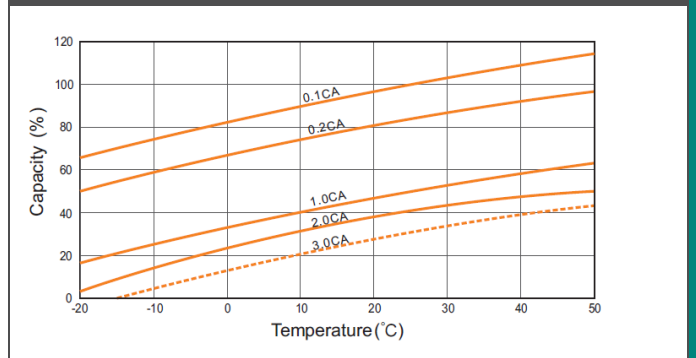
Relationship Between Charging Voltage And Temperature



Relationship Of OCV And State Of Charge (20°C)



Temperature Effects On Capacity



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