EV SERIES • VRLA AGM BATTERY • ELECTRIC VEHICLE SERIES

EV12-33 (12V 33Ah)

08/07/2021

Specifications

Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	33Ah@10hr-rate to 1.80V per cell @25℃
Weight	Approx. 10.2 Kg (Tolerance±3.0%)
Dimensions	Length 195 mm Width 130 mm Height 155 mm Total Height 168 mm
Internal Resistance	Approx. 9.0 mΩ
Terminal	T6
Layout	1
Max. Discharge Current	330A (5 sec)
Cold Cranking Ampere (CCA)	230A
Max. Charging Current	9.9A
Reference Capacity	C3 25.6AH C5 28.8AH C10 33.0AH C20 35.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temp. Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Nominal Operating Temp. Range	25℃±5℃
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25℃.Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

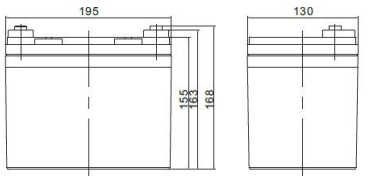
Description and Features

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.

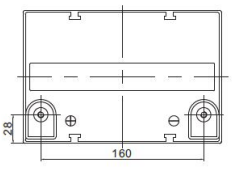
Features

- 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

MH 64495

Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
1.60V	111.0	83.76	63.02	36.86	20.36	12.02	9.32	7.32	6.23	4.19	3.48	1.82
1.65V	107.0	79.15	60.25	35.39	19.67	11.64	9.03	7.12	6.07	4.14	3.44	1.79
1.70V	101.8	72.87	56.43	33.82	19.03	11.26	8.78	6.93	5.91	4.08	3.39	1.77
1.75V	95.1	66.70	52.51	32.33	18.33	10.86	8.52	6.75	5.76	4.02	3.34	1.75
1.80V	86.62	60.38	48.49	30.90	17.63	10.48	8.26	6.56	5.62	3.95	3.30	1.73
1.85V	76.23	49.35	40.24	26.61	15.81	9.60	7.63	6.10	5.24	3.71	3.11	1.64

Constant Power Discharge Characteristics: Wpc (25°C)

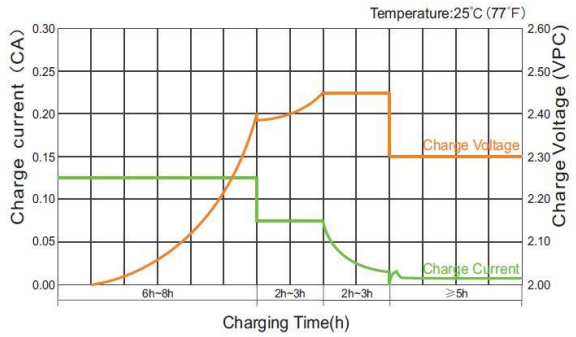
F.V/Time	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
1.60V	191.1	142.4	110.2	67.0	38.3	22.8	17.8	14.1	12.0	8.18	6.84	3.59
1.65V	189.0	137.1	106.9	64.9	37.2	22.2	17.3	13.7	11.7	8.10	6.77	3.53
1.70V	181.8	128.6	101.6	62.7	36.2	21.6	16.9	13.4	11.5	8.00	6.68	3.50
1.75V	172.9	119.8	95.9	60.5	35.1	20.9	16.5	13.1	11.2	7.90	6.60	3.46
1.80V	160.3	110.3	89.8	58.5	33.9	20.3	16.0	12.8	11.0	7.79	6.52	3.43
1.85V	143.6	91.8	75.6	50.8	30.6	18.7	14.9	11.9	10.3	7.33	6.15	3.26

(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.

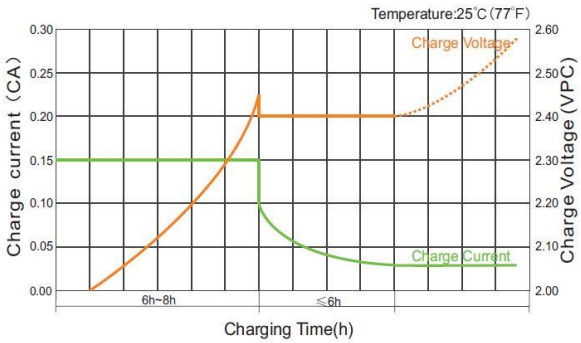
EV12-33 (12V 33Ah)

08/07/2021

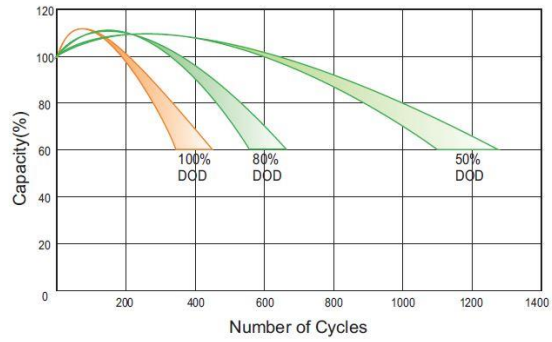
Charge Characteristic Curve For Cycle Use (IIUU)



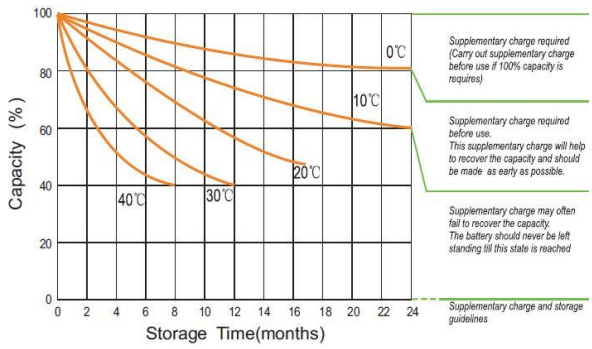
Charge Characteristic Curve For Cycle Use (IUI)



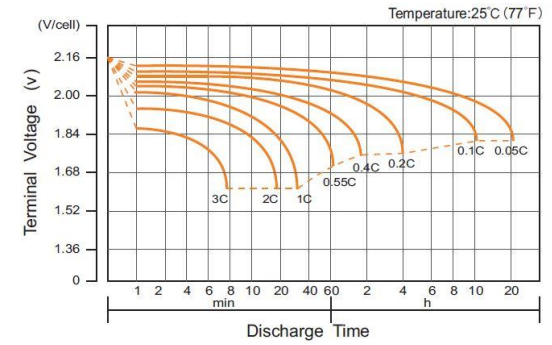
Cycle Life In Relation To Depth Of Discharge



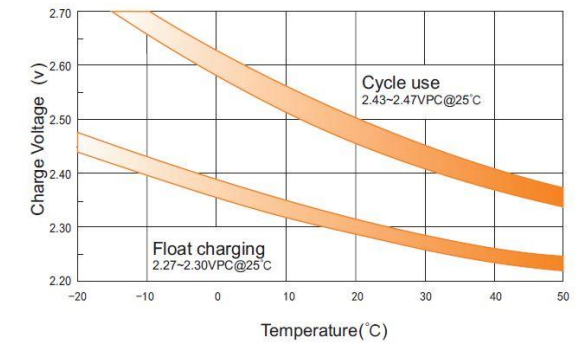
Storage Characteristics



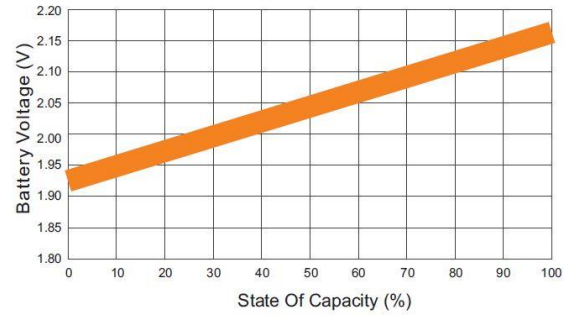
Discharge Characteristics Curve



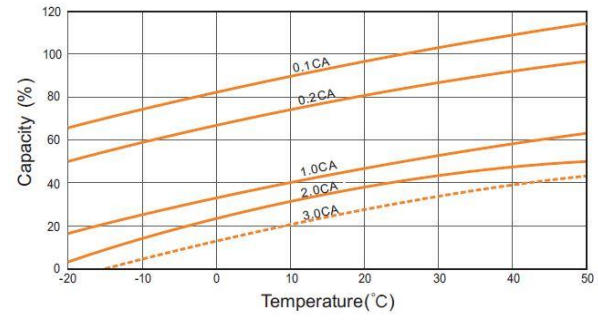
Relationship Between Charging Voltage And Temperature



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.