



VRLA Rechargeable Battery

HRL33-12



FEATURES

- Maintenance free(no water topping-up required).
- No free acid(Non-spillable battery).
- Low self-discharge rate, lower than 3% capacity loss per month.
- Can be used in any orientation(excluding used inverted).
- The battery is designed for high rate usage.
- Absorbent Glass Mat technology for efficient gas recombination.
- The power density at 5 min~15min discharging rate is 30% higher than BP series.

APPLICATION

- Wheelchairs
- Lawn Mowers
- UPS
- Golf-Carts
- Wind Power
- Electronic Medical Equipment



SPECIFICATIONS

Nominal Voltage	12 V
Nominal Capacity	31Ah @ 10 hour rate F.V.(1.75V/cell)
Approx. Weight	10.0Kg(22.05lbs.)
Terminals	B1 (Fitting M5 bolt & nut) , T2 and I1 are optional
Internal Resistance	≤7mΩ (Fully Charged)
Max. Discharge Current	420 A (5 sec.)
Max. Charge Current	9.30 A
Operating Temperature Range	Charge : 0°C~40°C(32°F~104°F) Discharge : -20°C~50°C(-4°F~122°F) Storage : -20°C~40°C(-4°F~104°F)
Container Material	Standard: ABS(UL 94-HB) HRL33-12 Optional: Flame Retardant ABS(UL 94-V0) HRL33-12FR



DIMENSION(mm/inch)	OUTER DIMENSIONS	TERMINAL TYPE
<ul style="list-style-type: none"> ■ Length 175±1.5 (6.89±0.06) ■ Width 166±1.5 (6.54±0.06) ■ Container Height 125±1.5 (4.92±0.06) ■ Total Height 125±1.5 (4.92±0.06) 		<ul style="list-style-type: none"> ● Terminal B1 12.0(0.47) 2.0(0.08) 4.5(0.18) 11.0(0.43) 5.5(0.22) [M5 BOLT & NUT] ● Terminal T2 3.4(0.13) 6.35(0.25) 7.95(0.31) 0.8(0.03) ● Terminal I1 M5x0.8 2.0(0.08) [M5 BOLT & NUT] <p>Terminal Hardware Initial Torque: B1(2.5Nm±5%),I1(4.0Nm±5%)</p>

Constant power discharge characteristics at 25 °C/77 °F		Unit: W								
F.V. (V/cell)	Discharge Time	5 Min	10 Min	15 Min	20 Min	30 Min	40 Min	50 Min	60 Min	120 Min
1.80V		1353.0	924.0	669.0	571.0	434.0	330.0	276.0	243.0	133.8
1.70V		1617.0	1031.0	728.0	605.0	452.0	342.0	285.0	248.0	136.4
1.60V		1733.0	1085.0	761.0	627.0	462.0	351.0	290.0	252.0	138.6
1.50V		1782.0	1106.0	777.0	637.0	468.0	355.0	294.0	255.0	139.3
1.40V		1815.0	1120.0	786.0	643.0	471.0	357.0	296.0	257.0	139.7
1.30V		1832.0	1130.0	792.0	647.0	474.0	359.0	298.0	257.0	140.1

Constant current discharge characteristics at 25 °C/77 °F		Unit: A								
F.V. (V/cell)	Discharge Time	5 Min	10 Min	15 Min	20 Min	30 Min	40 Min	50 Min	60 Min	120 Min
1.80V		120.80	81.05	57.87	48.97	36.78	27.75	23.10	20.25	11.15
1.70V		147.00	90.44	62.98	51.89	38.31	28.76	23.85	20.67	11.37
1.60V		157.55	95.18	65.83	53.77	39.15	29.52	24.27	21.00	11.55
1.50V		162.00	97.02	67.21	54.63	39.66	29.86	24.60	21.25	11.61
1.40V		165.00	98.25	67.99	55.15	39.92	30.03	24.77	21.42	11.64
1.30V		166.55	99.12	68.51	55.49	40.17	30.19	24.94	21.42	11.68

All data and artworks shall be changed without prior notice, BB reserves the right to explain and update the information contained hereinto.