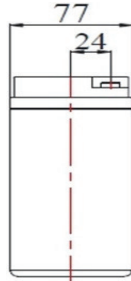
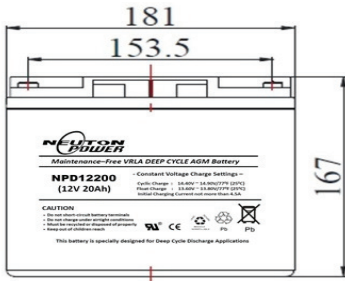


NPD series designed for applications that typically discharge 60% to 70% or more of the battery capacity. The battery is typically feature thick plates with high density active material. The thick battery plates allow for reserve energy to be stored deep within the battery plates and released during slow discharging such as trolling or solar applications. The high density material remains within the batteries' plate/grid structure longer, resisting the normal degradation found in cycling conditions. The battery is typically used for great extent discharge and recharged. The battery uses a different chemistry for the plates' active paste material and a slightly stronger acid. This chemistry allows for a much longer life in deep cycle applications with only a slightly reduction in maximum power output.



Performance Characteristics		
General Information	Length	181 mm
	Width	77 mm
	Height	167 mm
	Total Height	167 mm
	Approx Weight	6.0 kg ± 3%
	Nominal Voltage	12 Volt
	Number of Cells	6
	Nominal Capacity (20 hour rate)	20 Ah
	Terminal	M5
	Casing Material	Standard
Optional - UL94 V0, Flame Retardant		ABS
Nominal Capacity 77°F (25°C)	20 hour rate @ 1.80V (1.00A)	20 Ah
	10 hour rate @ 1.80V (1.88A)	18.8 Ah
	5 hour rate @ 1.70V (18.15A)	18.15 Ah
Internal Resistance	Fully Charged Battery 77°F (25°C) ≤ 13.5 mΩ	
Max. Discharge current in 5 sec	200 A	
Capacity affected by Temperature	104°F (40°C) @ 20 hour rate	102%
	77°F (25°C) @ 20 hour rate	100%
	32°F (0°C) @ 20 hour rate	85%
	5°F (-15°C) @ 20 hour rate	65%
Reserve capacity to 10.5V at 27°C (the number of minutes a battery at 25A or 75A)	@ 25Amps	20 mins
	@ 75Amps	---
Constant voltage charging @ 77°F (25°C)	Initial charging current	≤ 5.4 A
	Boost charging voltage	14.4V to 14.9V
	Float charging voltage	13.6V to 13.8V

Constant Current Discharge Data (Amperes at 25°C)											
End Point Volts/Cell	10min	15min	30min	45min	1hr	2hr	3hr	5hr	8hr	10hr	20hr
1.60V	52.3	38.4	22.8	16.6	13.0	8.26	5.66	3.77	2.53	2.00	1.07
1.65V	50.2	37.6	22.4	16.3	12.6	8.11	5.54	3.71	2.48	1.97	1.05
1.70V	47.4	37.1	22.1	16.1	12.2	7.94	5.46	3.63	2.43	1.95	1.04
1.75V	45.2	35.1	21.4	15.7	11.8	7.80	5.34	3.57	2.41	1.91	1.02
1.80V	42.1	32.8	20.5	15.2	11.5	7.51	5.14	3.43	1.34	1.88	1.00

Constant Power Discharge Data (Watts per cell at 25°C)											
End Point Volts/Cell	10min	15min	30min	45min	1hr	2hr	3hr	5hr	8hr	10hr	20hr
1.60V	100.0	74.3	44.3	32.4	25.7	16.2	11.1	7.47	5.05	4.01	2.11
1.65V	96.4	72.8	43.7	32.0	24.8	15.9	10.9	7.33	4.98	3.98	2.08
1.70V	91.2	72.0	43.2	31.7	23.9	15.6	10.7	7.21	4.90	3.95	2.05
1.75V	87.0	68.3	41.9	30.9	23.0	15.3	10.5	7.06	4.86	3.88	2.02
1.80V	81.4	63.9	40.4	30.0	22.1	14.7	10.1	6.80	4.73	3.84	2.00

Above data provided from tested samples is generally for descriptive only. It is not intent to make or imply any representation; guarantee or warranty with respect to any battery cell. Battery cell designs/specifications are subject to modify without prior notice.