



VRLA Battery

NPL12330M

12V33AH

Medium-size Battery

**NPL SERIES —Medium-size Battery**

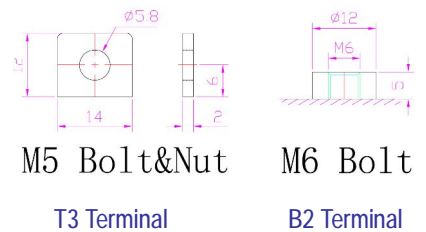
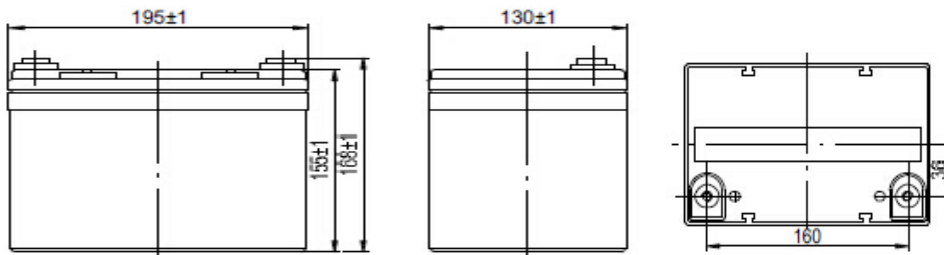
- High performance, completely maintenance-free, low self-discharge
- 100% precise quality testing, stable quality and high reliable performance
- Unique grid alloy formula and updated manufacturing technique
- Floating & standby use: up to 8 years
- Cycle use 1: Up to 260 cycles at 100% DOD
- Cycle use 2: Up to 500 cycles at 50% DOD

**Application:**

- Telecommunications
- Alarm and security system
- Uninterruptable Power Supply (UPS)
- Communication power supply
- Electric Power System (EPS)
- DC power supply
- Emergency backup power supply
- Auto control system

**Construction:**

- Component .....Raw material
- Sealant .....Epoxy
- Positive .....Lead dioxide
- Safety valve .... Rubber
- Negative .....Lead
- Terminal .....Copper/Pb
- Container .....ABS
- Separator .....Fiber glass
- Cover .....ABS
- Electrolyte ..... Sulfuric acid



**Speification:**

Battery Model	NPL12330M (12V33AH)			
Designed Floating Life	Up to 5 Years			
Capacity (25°C)	20HR(1.63A,10.8V)	10HR(3.27A,10.8V)	5HR(5.38A,10.5V)	1HR(18.2A,10.5V)
	32.60AH	32.70AH	26.90AH	18.20AH
Dimensions	Length	Width	Height	Total Height
	196mm (7.72inch)	131mm (5.16inch)	161mm (6.34inch)	170mm(6.70inch)
Approx. Weight	10.60KG(4.82lbs) +/-5%			
Internal Resistance	Full charged at 25°C: ≤16.0mΩ			
Self Discharge	2% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	14.40-15.00V(-30mV/°C), max. Current:9.90A		13.50-13.80V (-20mV/°C)	



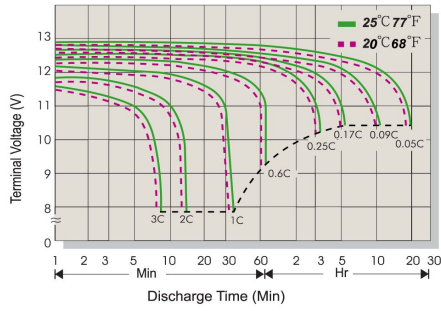


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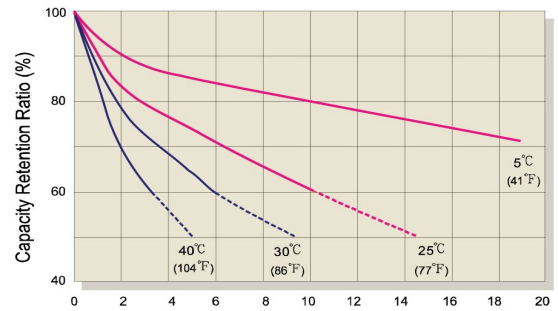
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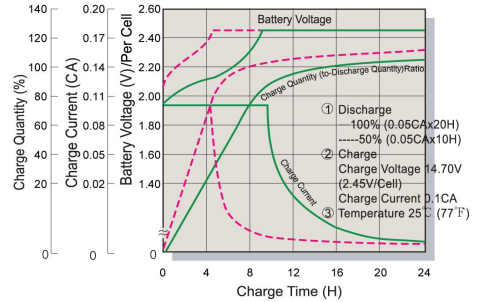
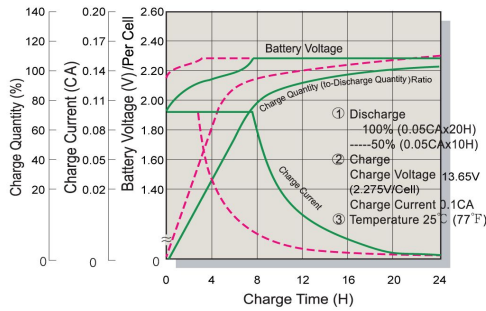
Terminal Voltage (V) and Discharge Time



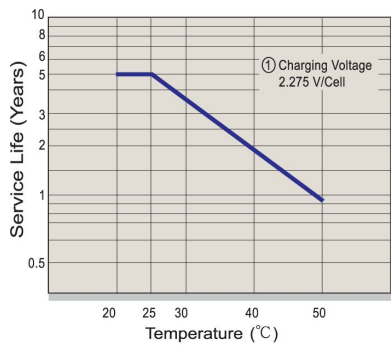
Capacity Retention Characteristic



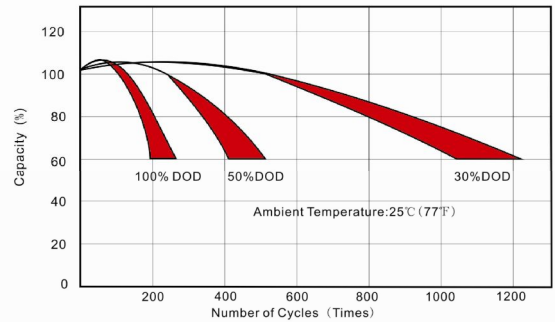
Battery Voltage and Charge Time for Standby Use



Tickle(or Float) Service Life



Cycle Service Life



Constant Current Discharge(CC,Unit:A) at 25°C(77°F)

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.85V/Cell	73.8	54.3	47.2	28.5	16.8	9.9	7.4	6.21	5.11	4.70	3.13	1.61
1.80V/Cell	76.6	56.4	49.0	29.5	17.5	10.3	7.7	6.46	5.32	4.90	3.27	1.63
1.75V/Cell	84.3	59.2	51.4	30.7	18.2	10.6	7.9	6.53	5.38	4.95	3.30	1.66
1.70V/Cell	94.2	62.1	53.9	32.2	18.5	10.8	8.1	6.59	5.43	5.00	3.33	1.71
1.67V/Cell	104.2	64.9	56.3	33.1	19.2	11.1	8.3	6.66	5.48	5.04	3.36	1.73

Constant Power Discharge (CP,Unit:W) at 25°C(77°F)

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.85V/Cell	140.2	103.3	89.6	54.1	31.9	18.8	14.0	11.79	9.71	8.93	5.96	3.06
1.80V/Cell	145.5	107.2	93.1	56.1	33.2	19.5	14.6	12.28	10.11	9.31	6.20	3.19
1.75V/Cell	160.1	112.6	97.7	58.4	34.5	20.1	15.0	12.41	10.21	9.40	6.27	3.23
1.70V/Cell	179.0	117.9	102.4	61.2	35.2	20.5	15.3	12.53	10.31	9.49	6.33	3.26
1.67V/Cell	197.9	123.3	107.0	62.9	36.5	21.1	15.7	12.65	10.42	9.58	6.39	3.29