# NM12-100L

**12V 100Ah / 10hr rate**

BATTERY Genergy

## Introduction

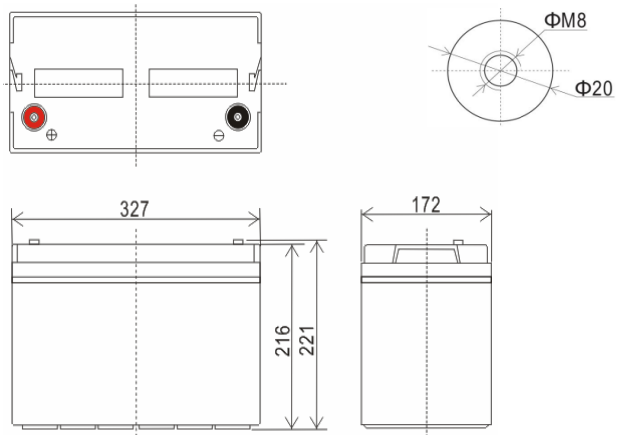
**Genergy NML (Long life) Series** is designed for solar and renewable energy system. GEL electrolyte and AGM seperator are applied in this series with feature of long service life. It is widely used in solar and wind power system, UPS and power utility.

### Battery Features

- Increase durability and deep cycle ability for heavy demand applications
- Low self-discharge
- Fully tank formed plates
- Low impurity electrolyte
- Spill proof / leak proof
- Multi-position usage
- ABS case and cover VO upon request
- Very high purity lead

## Battery Picture & Terminal Layout

Terminal Type: T13




## Electrical Specification

| | |
|---|---|
| Design floating Life @ 20°C (68°F) | 10 years |
| Nominal Capacity @ 25°C /77°F | |
| 20 hour rate 5.45A to 1.75Vpc | 109 Ah |
| 10 hour rate 10.38A to 1.75Vp | 103.8 Ah |
| Internal Resistance | |
| (Fully charged battery @ 25°C /77°F ) | 5mΩ |
| Max. Discharge Current @ 25°C /77°F | 1000 A (5S) |
| Charge Methods: Constant voltage charge @ 25°C /77°F | |
| Cycle Use | 14.7 ~ 14.9V |
| Max. Current | 27 A |
| Standby Use | 13.6 - 13.8V |
| Operating Temperature Range | -30 ~ 50°C |

*Notes: battery voltage must be adjusted according to temperature. Please refer to our recommendation.*

Self-Discharge

3% of capacity declined per month @ 25°C (77°F).

## Dimension & Weight

| Dimension (± 2mm) | | | | Weight |
|---|---|---|---|---|
| Length | Width | Height | Total Height | (± 2%) |
| 327 mm | 172 mm | 216 mm | 221 mm | 31.2 kg |
| 12.9 inch | 6.8 inch | 8.5 inch | 8.7 inch | 68.8 lbs |

## Typical Applications

- Solar Energy System
- Wind Energy System
- Power Utility
- UPS/EPS

## Constant Current Discharge (Amperes @ 25°C /77°F)

| V/cell | 10min | 15min | 20min | 25min | 30min | 35min | 40min | 45min | 50min | 55min | 1hr | 2hr | 3hr | 4hr | 5hr | 10hr | 20hr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60 | 248.6 | 189.8 | 164.7 | 139.6 | 118.4 | 107.2 | 100.0 | 92.8 | 86.0 | 79.5 | 73.6 | 41.01 | 29.76 | 24.83 | 20.50 | 10.85 | 5.70 |
| 1.65 | 236.1 | 180.2 | 156.5 | 132.8 | 113.1 | 102.4 | 95.7 | 88.9 | 82.7 | 76.6 | 71.2 | 39.62 | 28.64 | 23.85 | 19.65 | 10.59 | 5.56 |
| 1.70 | 226.3 | 172.8 | 150.3 | 127.9 | 109.4 | 99.0 | 92.5 | 86.0 | 80.1 | 74.3 | 69.1 | 38.41 | 27.97 | 23.28 | 19.20 | 10.49 | 5.51 |
| 1.75 | 215.9 | 164.8 | 143.6 | 122.5 | 105.2 | 95.3 | 89.2 | 83.2 | 77.6 | 72.3 | 67.5 | 37.51 | 27.36 | 22.77 | 18.79 | 10.38 | 5.45 |
| 1.80 | 204.7 | 156.3 | 136.6 | 116.9 | 101.0 | 91.4 | 85.8 | 80.1 | 74.9 | 69.9 | 65.5 | 36.31 | 26.70 | 22.21 | 18.33 | 10.11 | 5.31 |

## Constant Power Discharge (Watts/cell @ 25°C /77°F)

| V/cell | 10min | 15min | 20min | 25min | 30min | 35min | 40min | 45min | 50min | 55min | 1hr | 2hr | 3hr | 4hr | 5hr | 10hr | 20hr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60 | 431.8 | 329.6 | 290.1 | 250.5 | 217.1 | 197.0 | 183.0 | 169.0 | 155.7 | 143.8 | 132.5 | 74.33 | 54.73 | 46.01 | 38.49 | 21.23 | 11.20 |
| 1.65 | 416.5 | 317.9 | 280.4 | 242.8 | 211.3 | 191.8 | 178.3 | 164.8 | 152.1 | 140.7 | 129.9 | 72.83 | 54.21 | 45.50 | 37.98 | 21.03 | 11.20 |
| 1.70 | 400.4 | 305.7 | 269.9 | 234.2 | 204.6 | 185.7 | 172.9 | 160.1 | 148.1 | 137.4 | 127.3 | 71.33 | 53.19 | 44.70 | 37.42 | 20.62 | 11.05 |
| 1.75 | 383.0 | 292.4 | 258.6 | 224.9 | 197.2 | 179.1 | 167.0 | 154.9 | 143.6 | 133.6 | 124.2 | 69.53 | 51.66 | 43.61 | 36.75 | 20.46 | 10.85 |
| 1.80 | 364.2 | 278.0 | 246.5 | 214.9 | 189.4 | 171.9 | 160.6 | 149.2 | 138.5 | 129.3 | 120.6 | 67.43 | 50.28 | 42.51 | 35.93 | 20.26 | 10.75 |

*Subject to revision without notice. Please contact our sales representatives for latest version.*

**Web:** www.genergybattery.com | **Email:** sales@genergybattery.com

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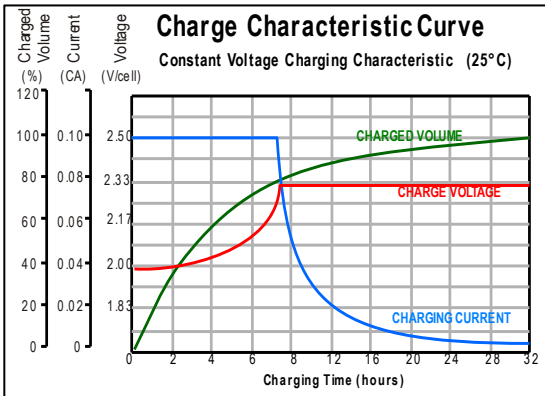
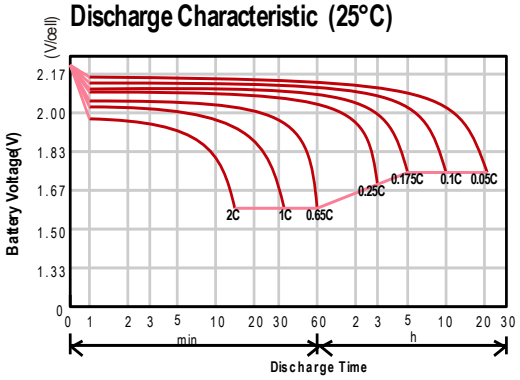
## Graphs

### Charge Characteristic Curve

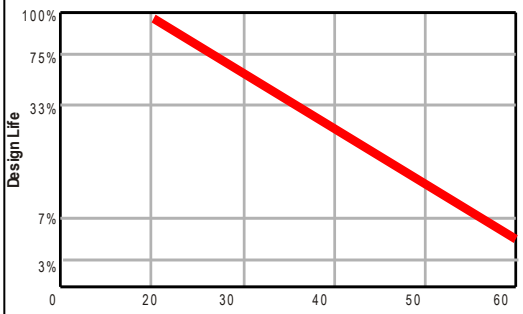
Constant Voltage Charging Characteristic (25°C)




### Discharge Characteristic (25°C)

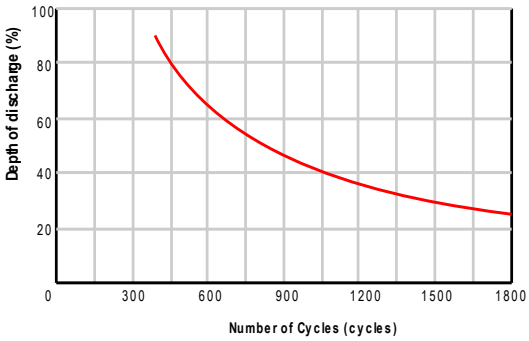



### Temperature Effects On Float Life

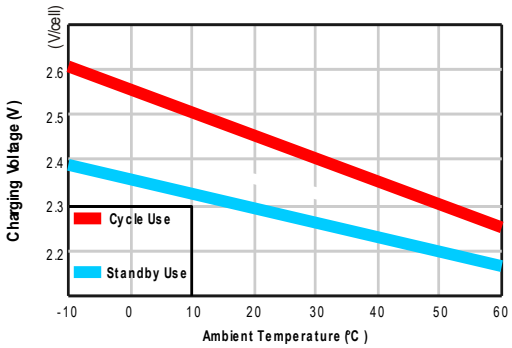



*Note:If float charge temprature is adjusted to our recommendation, then maximum will be achieved.*

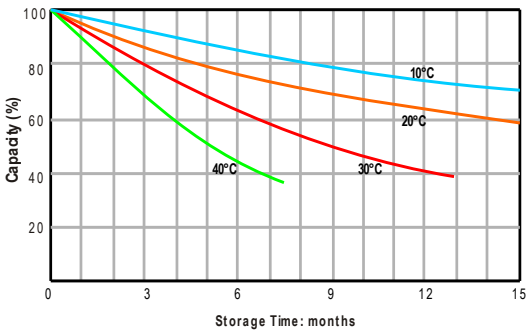
### Cycle Service Life V.S. Depth Of Discharge



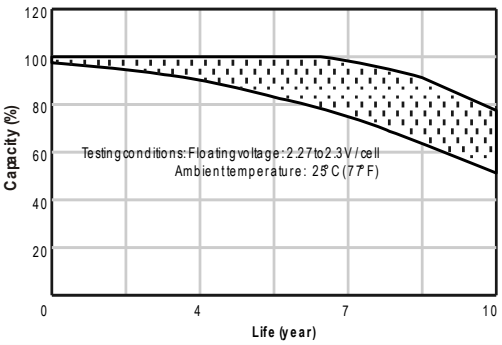

### Charging Voltage V.S. Temperature

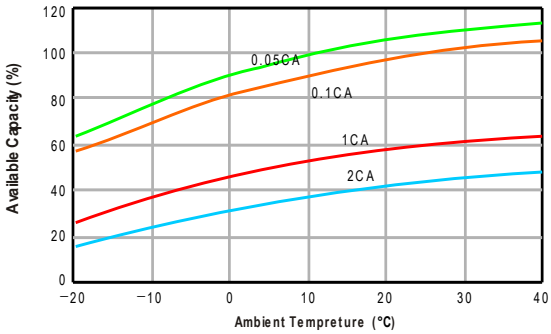



### Self-Discharge Characteristic




### Life Characteristics Of Standby Use




### Temperature Effects On Capacity