NM12-40L

12V 40Ah / 10hr rate

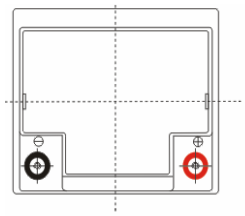
Introduction

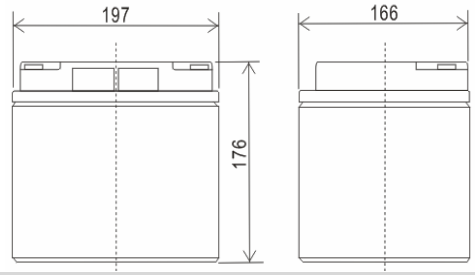
Genergy NML (Long life) Series is designed for solar and renewable energy system. GEL electrolyte and AGM seperator are applied in this series with feature of long service life. It is widely used in solar and wind power system, UPS and power utility.

Battery Features

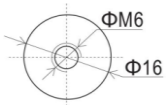
- ○ Increase durability and deep cycle ability for heavy demand applications
- ○ Low self-discharge
- ○ Fully tank formed plates
- ○ Low impurity electrolyte
- ○ Spill proof / leak proof
- ○ Multi-position usage
- ○ ABS case and cover VO upon request
- ○ Very high purity lead

Battery Picture & Terminal Layout





Terminal Type: T12



Electrical Specification

Design floating Life @ 20°C (68°F)	10 years
Nominal Capacity @ 25°C /77°F	
20 hour rate 2.10A to 1.75Vpc	42 Ah
10 hour rate 4.00A to 1.75Vpc	40 Ah
Internal Resistance	
(Fully charged battery @ 25°C /77°F)	10mΩ
Max. Discharge Current @ 25°C /77°F	400 A (5S)
Charge Methods: Constant voltage charge @ 25°C /77°F	
Cycle Use	14.7 ~ 14.9V
Max. Current	10 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%)
197 mm	166 mm	176 mm	176 mm	12.6 kg
7.8 inch	6.5 inch	6.9 inch	6.9 inch	27.8 lbs

Typical Applications

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

Certificates

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	95.2	72.7	62.8	52.9	45.2	40.3	37.5	34.8	32.6	30.6	29.2	16.01	11.42	9.32	7.62	4.07	2.14
1.65	90.4	69.0	59.9	50.9	44.0	39.2	36.6	34.0	31.9	30.1	28.8	15.78	11.21	9.13	7.45	4.05	2.13
1.70	86.6	66.1	57.6	49.0	42.6	37.9	35.4	32.9	31.0	29.2	28.0	15.32	10.96	8.91	7.27	4.01	2.11
1.75	82.6	63.1	55.0	46.9	41.0	36.5	34.2	31.8	30.0	28.4	27.4	14.98	10.72	8.72	7.11	4.00	2.10
1.80	78.4	59.8	52.3	44.7	39.4	35.0	32.8	30.6	29.0	27.5	26.6	14.52	10.47	8.50	6.94	3.87	2.03

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	165.3	126.2	111.0	95.9	83.9	75.4	70.0	64.7	60.0	56.8	54.1	29.76	21.32	17.61	15.10	8.13	4.29
1.65	159.4	121.7	107.3	92.9	81.7	73.4	68.3	63.1	58.6	55.6	53.1	29.19	21.12	17.42	14.91	8.05	4.29
1.70	153.3	117.0	103.3	89.7	79.1	71.1	66.2	61.3	57.1	54.3	52.1	28.61	20.73	17.11	14.69	7.89	4.23
1.75	146.6	111.9	99.0	86.1	76.3	68.6	63.9	59.3	55.4	52.9	50.9	27.92	20.15	16.69	14.44	7.83	4.15
1.80	139.4	106.4	94.3	82.3	73.3	65.8	61.5	57.1	53.5	51.2	49.6	27.12	19.62	16.27	14.13	7.75	4.11

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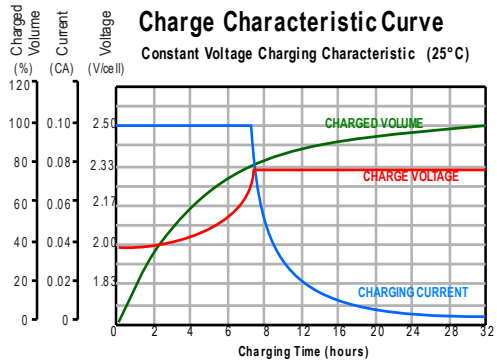
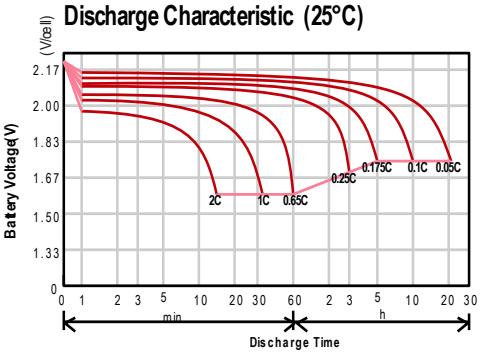
Graphs

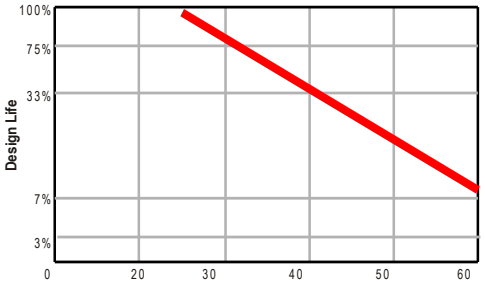
Charge Characteristic Curve



Discharge Characteristic (25°C)

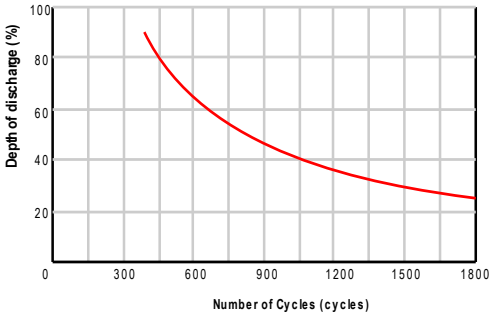


Temperature Effects On Float Life

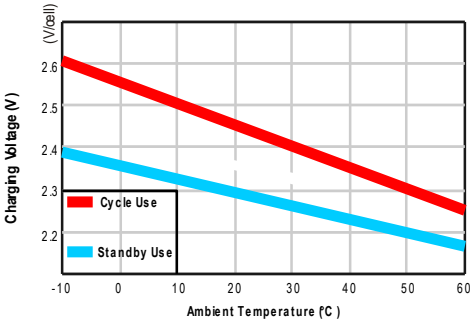


Note:If float charge tempreture is adjusted to our recommendation, then maximum will be achieved.

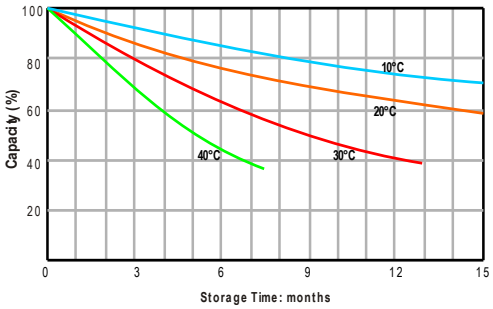
Cycle Service Life V.S. Depth Of Discharge



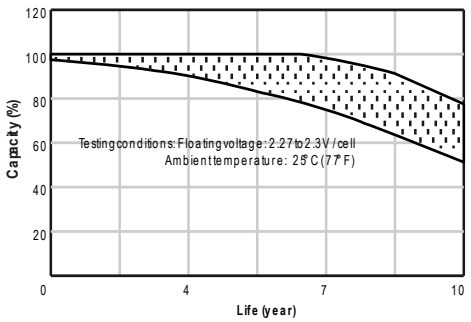
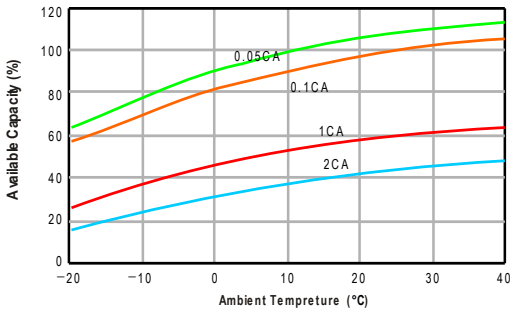
Charging Voltage V.S. Temperature



Self-Discharge Characteristic



Life Characteristics Of Standby Use



Temperature Effects On Capacity