

Specifications	
Nominal Voltage	12V
Nominal Operating Range	25°C ± 5°C
Dimensions	Length : 483 mm
	Width : 170 mm
	Total Height : 241 mm
Weight	45,0 Kg
Int. Resistance (25 °C)	3,6 mΩ
Float Service Lifetime	10-12 years
Container Material	A.B.S. UL94-HB (UL94-V0 Optional).

Compliant Standards	
IEC 60896-21/22:2004	
BS 6290-3/4	
IEC 62485-2	
IEC 61427	
Eurobat Guide 2015 classification : Long Life	

Characteristics	
Capacity 25°C	187Ah 100HR (1.85V)
	151Ah 10HR (1.80V)
Charging Voltage (25 °C)	Float use : 13,5 to 13,8 VDC
	Cycle Use : 14,4 to 15,0 VDC
Max Charging Current	37,5A (recomm. 15A)
Self-Discharge (25°C)	less than 3% per month
Max Discharge Current	1800A (5sec)
Operating Temperature Range	Discharge : -40 to +60°C
	Charge : -20 to +50°C
	Storage : -20 to +50°C

Applications	
Off – Grid Solar Systems	
UPS/EPS/ Power systems	
Telecommunications – Traffic Lights	
Emergency lighting - Auto control system	
Marine Signaling/Service applications	

Technology

NORTHBATT HG Hybrid Gel series is designed for repeated Deep Cycle use, to be discharged and recharged hundreds of times. The consistency performance of group usage (groups with multiple connections) is much better than of other general series, making **HG** ideal for heavy duty applications.

By combining the newly developed Nanometer Gel electrolyte, high tin content cathode plate and AGM separator, **HG** series enjoys excellent discharging performance, long cycle life and stable performance at high and low temperature surrounding. It is suited for all kinds of ranges for the energy storage, especially for renewable solar energy systems etc.

It differs from conventional VRLA batteries, as it contains more lead, heavier plates and other special materials that are able to deliver more power and capacity over many charging cycles. The use of a special plate curing process for 10 days and extra superior pasting to the grids, ensuring long service life and fast recovery from deep discharge.

NORTHBATT HG Hybrid Gel provides excellent cyclic and recovery performance after over-discharging. It incorporates the latest Hybrid Gel VRLA technology and excellent know-how.

Features

- Nanosilica colloidal electrolyte and high tin positive plate alloy design to enhance battery performance.
- Relatively rich electrolyte, high temperature and low temperature performance is superior.
- Long cycle life, excellent deep cycle discharge ability.
- Excellent charge acceptance ability.
- Precision sealing technology.

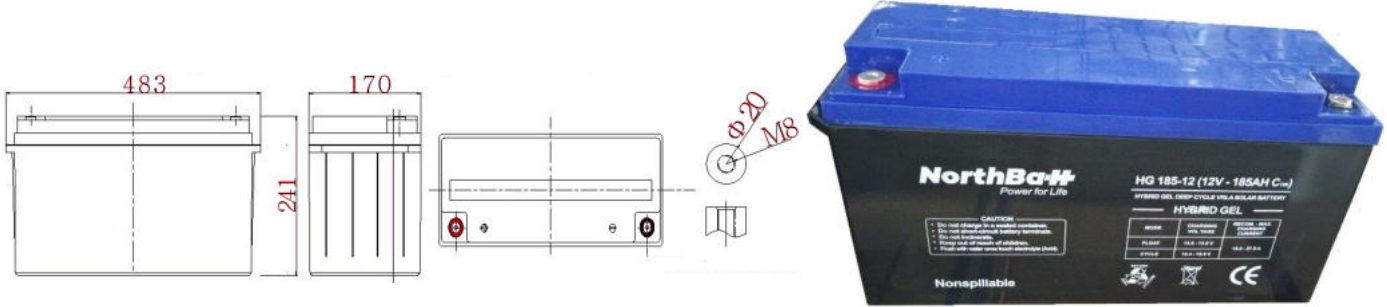
Constant Current Discharge Table : Amperes (25°C)

[A]	TIME - AMPERE CONSTANT CURRENT DISCHARGE (25 °C)									
	F.V	15min	30min	1h	3h	5h	10h	20h	100h	120h
1.65V	269,67	166,65	99,38	41,21	27,67	15,55	8,18	.....	.....
1.70V	263,61	163,62	98,68	40,60	27,37	15,35	8,09	.....	.....
1.75V	255,53	161,60	97,16	40,20	27,07	15,25	8,08	.....	.....
1.80V	238,36	154,53	94,74	39,90	26,36	15,15	8,06	1,91	1,66	
1.85V	212,10	141,40	87,77	35,57	25,05	14,65	7,93	1,87	1,62	

Constant Power Discharge Table : Watts/cell (25°C)

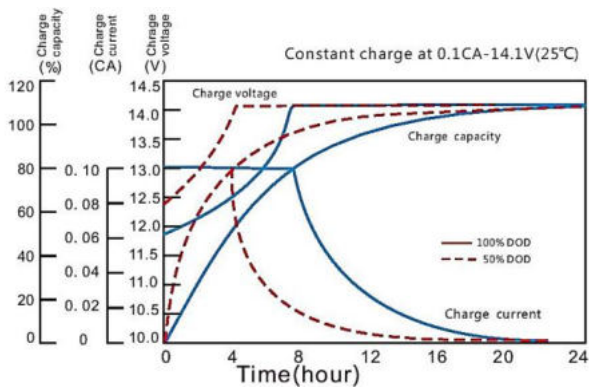
[W]	TIME - WATTS/CELL CONSTANT POWER DISCHARGE (25 °C)									
	F.V	15min	30min	1h	3h	5h	10h	20h	100h	120h
1.65V	481,77	303,00	187,86	78,17	52,26	29,90	16,16	.....	.....
1.70V	475,71	303,00	185,84	77,67	52,22	29,59	16,15	.....	.....
1.75V	472,68	301,99	184,83	77,27	51,91	29,29	16,06	.....	.....
1.80V	447,43	294,92	182,81	76,96	51,41	28,99	15,96	3,82	3,31	
1.85V	399,96	269,67	169,68	73,23	48,99	28,48	15,86	3,70	3,19	

Dimensions – Terminals - Photo

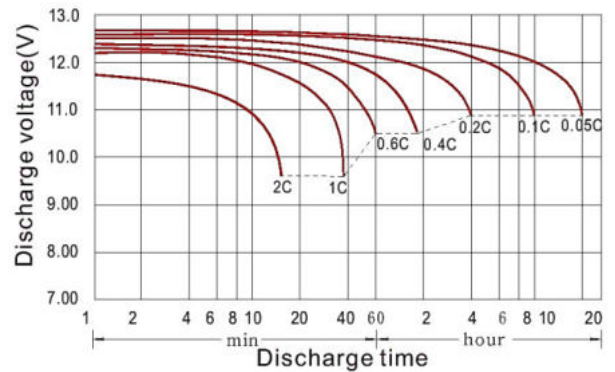


Performance Curves

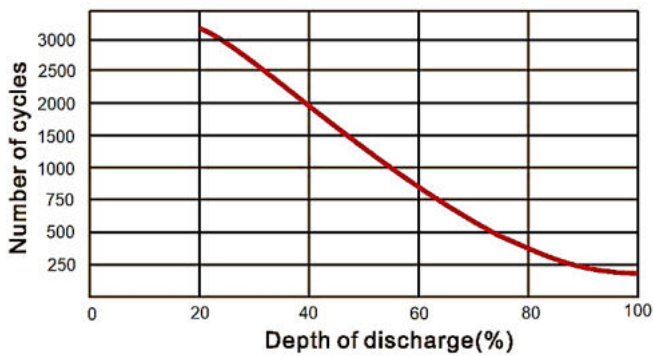
Charge characteristic Curve



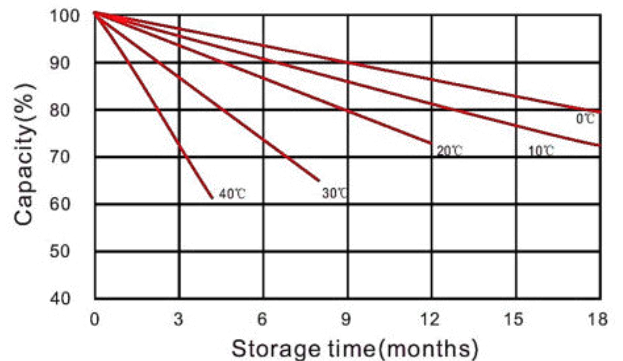
Discharge characteristic Curve



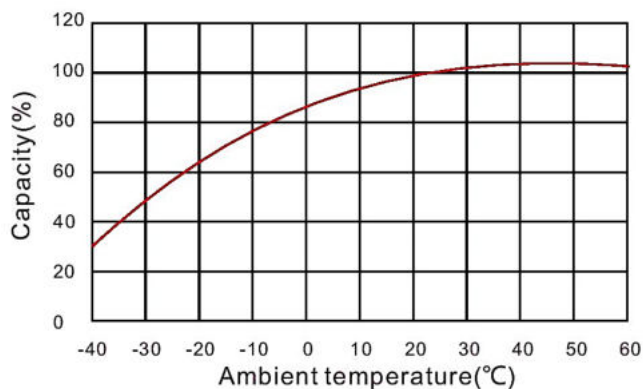
Life characteristics of cyclic use



Storage characteristic



Temperature vs Capacity



OCV vs Capacity

