

Specifications	
Nominal Voltage	12V
Nominal Operating Range	25°C ± 5°C
Dimensions	Length : 483 mm
	Width : 170 mm
	Total Height : 241 mm
Weight	47,0 Kg
Int. Resistance (25 °C)	3,3 mΩ
Float Service Lifetime	15 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 : Very Long Life	

Characteristics	
Capacity 25°C	195,0 AH 100HR (1.85V)
	151,5 AH 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	45A (recomm. 15-22,5A)
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	
On/Off – Grid & Hybrid Energy Storage Systems	
Distributed infrastructure / mobile telecoms & utilities	
Traffic Lights / Emergency lighting	
Power smoothing / load shifting / ramp control	
Marine Signaling / Service applications	

Technology

NORTHBATT LC Lead - Carbon series is the latest product in the **NORTHBATT** Solar battery family. This product has been specially designed for Renewable Energy Sources such as solar and wind power storage system, based on international advanced lead-carbon technology. Grid alloy and structure, active material formula, battery case material and electrolyte compositions are optimized by high specific surface area Carbon materials with high electric conductivity and dispersibility to active material, improving utilizing rate, protect negative plate effectively and restrain the growth of lead sulfate crystallization. **NORTHBATT LC** series is mixture of Lead-acid battery and super capacitor, providing not only high energy density, but also high power, rapid charge and discharge as well as longer cycle life.

Features & Benefits

- Adopt lead carbon technology, combine the advantage of lead - acid battery and supercapacitor.
- Reduce the cathode sulphation, ideal for PSOC cycle application. More than 3000 cycles at 50% D.o.D.
- Multiple plate grid alloy and special grid structure, extended battery life
- Improve the conductivity of the plates, reduce battery internal resistance, improve the battery discharge performance.
- Increase the specific surface area of negative plate, improve the reaction efficiency of the active substance.
- Restrain the grow-up of lead sulfate of lead sulfate, no negative plate sulfation when battery is used.
- Unique plates elongation resistance structure, solve the problem of plates creep elongation.
- 15 years design life.
- Superior PSOC cycling performance, excellent deep cycling profile, very fast charging time, reduced charging time by 50%.

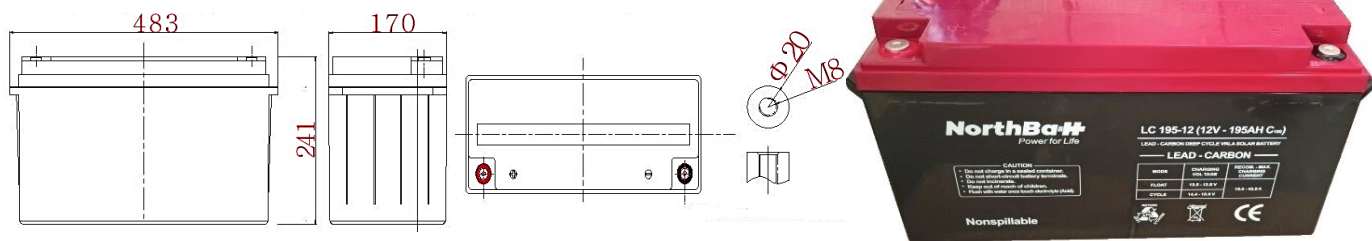
Constant Current Discharge Table : Amperes (25°C)

[A]	TIME - AMPERE CONSTANT CURRENT DISCHARGE (25 °C)									
	F.V	15min	30min	1h	3h	5h	10h	20h	100h	120h
1.65V	283,81	174,73	102,01	42,42	28,48	15,76	8,31	.....	.....	.....
1.70V	277,75	171,70	102,01	41,81	28,18	15,66	8,26	.....	.....	.....
1.75V	268,66	170,69	100,19	41,41	27,88	15,45	8,23	.....	.....	.....
1.80V	250,48	162,61	97,67	41,11	27,17	15,15	8,19	1,96	1,70	1,70
1.85V	223,21	148,47	90,40	38,68	25,76	14,85	8,05	1,95	1,68	1,68

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

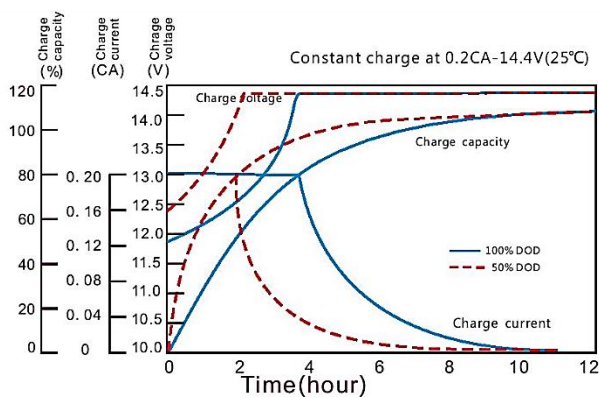
[W]	TIME - WATTS/CELL CONSTANT POWER DISCHARGE (25 °C)									
	F.V	15min	30min	1h	3h	5h	10h	20h	100h	120h
1.65V	506,01	319,16	192,91	80,50	54,24	30,30	16,46	.....	.....	.....
1.70V	499,95	319,16	191,90	80,09	53,83	30,00	16,36	.....	.....	.....
1.75V	496,92	317,14	189,88	79,59	53,53	29,69	16,26	.....	.....	.....
1.80V	469,65	310,07	188,87	79,29	52,92	29,39	16,26	3,92	3,33	3,33
1.85V	420,16	283,81	175,74	75,45	50,50	28,89	16,06	3,89	3,21	3,21

Dimensions - Terminals

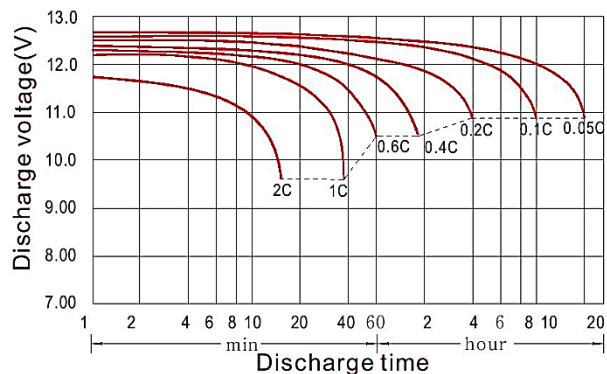


Performance Curves

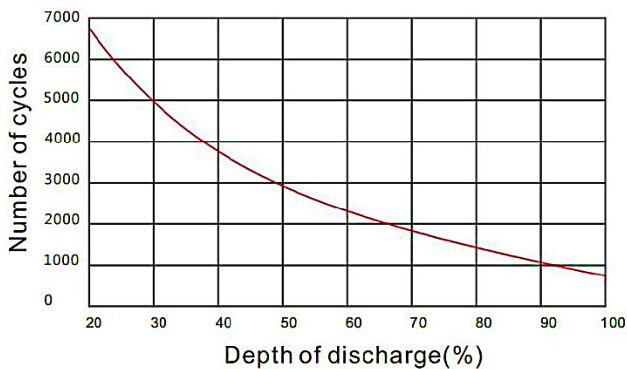
Charge characteristic Curve



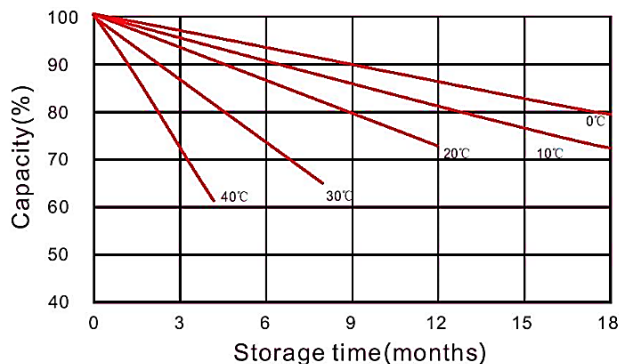
Discharge characteristic Curve



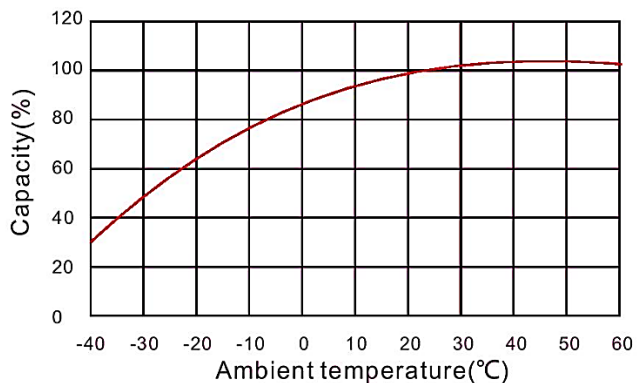
Life characteristics of cyclic use



Storage characteristic



Temperature vs Capacity



OCV vs Capacity

