

High Temperature Deep Cycle GEL Battery

HTB12-150

The HTB deep cycle gel battery adopts the advanced developed nano gel electrolyte with super-C additive plus heavy duty plates design inside. It has a longer service life even deep cycle discharge use and can provide optimum and reliable service under extreme condition such as high temperature and frequent power failure, thus it is highly suited for tropical area in outdoor applications such as Telecom BTS stations and Off-grid PV system.

GENERAL FEATURES

- Able to operate at 40-60°C
- Integrated design to ensure the best uniformity and reliability
- Longer life and higher stability under high temp. environment (no air-con needed)
- Super-C additives: Deep discharge recovery capability, 1600cycles @50%DOD

APPLICATIONS

- BTS Stations
- Solar & Wind energy system
- UPS system
- Telecom systems
- Wheel chair, Golf cart

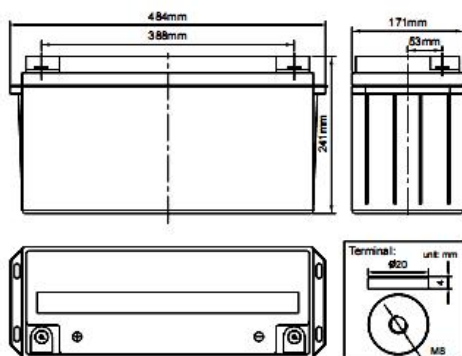


COMPLIED STANDARDS

IEC 60896-21/22 JIS C8704
 IEC61427 BS6290 part4
 GB/T 19638 CE/ISO

DIMENSIONS & WEIGHT

Length(mm)	484±1
Width(mm)	171±1
Height(mm)	241±1
Total Height(mm)	241±1
Weight(kg)	45.7±3%



TECHNICAL SPECIFICATIONS

Nominal Voltage		12V (6 cells per unit)
Design Floating Life @25°C		20 Years
Nominal Capacity @25°C (20 hour rate@7.5A,10.8V)		150Ah
Capacity @25°C	10hour rate (13.5A,10.8V)	135Ah
	5 hour rate (23.9A,10.5V)	119.5Ah
	1 hour rate (86.6A,9.6V)	86.6Ah
Internal Resistance	Full Charged Battery@25°C	≤4.0mΩ
Ambient Temperature	Discharge	-25°C~60°C
	Charge	-25°C~60°C
	Storage	-25°C~60°C
Max.Discharge Current@25°C		800A(5s)
Capacity affected by Temperature (10 hour)	40°C	108%
	25°C	100%
	0°C	90%
	-15°C	70%
Self-Discharge@25°C per Month		3%
Charge (Constant Voltage) @25°C	Standby Use	Initial Charging Current Less than 33.75A Voltage 13.6-13.8V
	Cycle Use	Initial Charging Current Less than 33.75A Voltage 14.4-14.9V

BATTERY DISCHARGE TABLE

Discharge Constant Current per Cell (Amperes at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	234.3	139.4	99.0	86.6	52.9	37.1	25.2	16.7	14.9	8.10	1.80
1.65V	230.0	136.9	97.2	85.1	51.9	36.5	24.8	16.4	14.6	7.95	1.76
1.70V	225.8	134.4	95.4	83.5	51.0	35.8	24.3	16.1	14.3	7.80	1.73
1.75V	221.5	131.8	93.6	81.9	50.0	35.1	23.9	15.8	14.0	7.65	1.70
1.80V	213.0	126.8	90.0	78.8	48.1	33.8	23.0	15.2	13.5	7.50	1.67

Discharge Constant Power per Cell (Watts at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	451.0	268.4	190.6	166.8	101.8	71.5	48.6	32.1	28.6	15.6	3.46
1.65V	442.8	263.5	187.1	163.7	99.9	70.2	47.7	31.5	28.1	15.3	3.40
1.70V	434.6	258.6	183.6	160.7	98.1	68.9	46.8	30.9	27.5	15.0	3.33
1.75V	426.4	253.8	180.2	157.7	96.2	67.6	45.9	30.3	27.0	14.7	3.27
1.80V	410.0	244.0	173.3	151.6	92.5	65.0	44.2	29.2	26.0	14.4	3.21

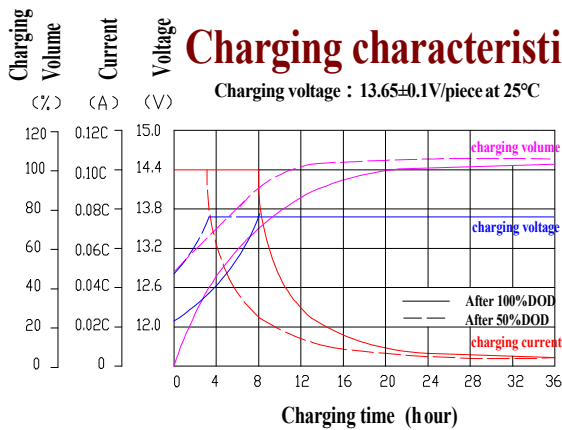
Note The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice.

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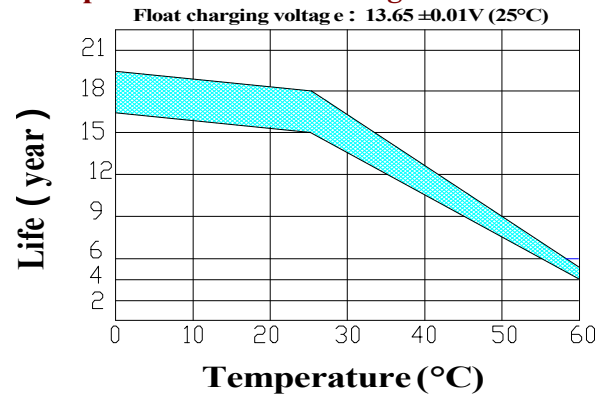
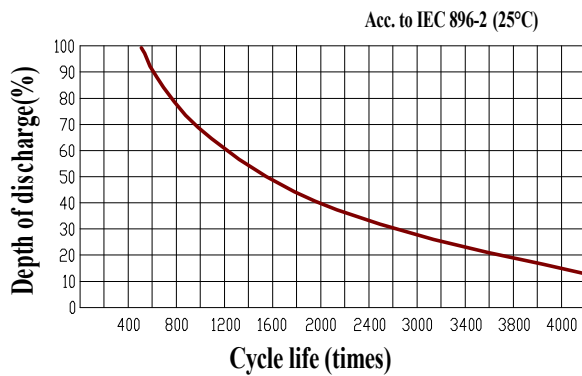
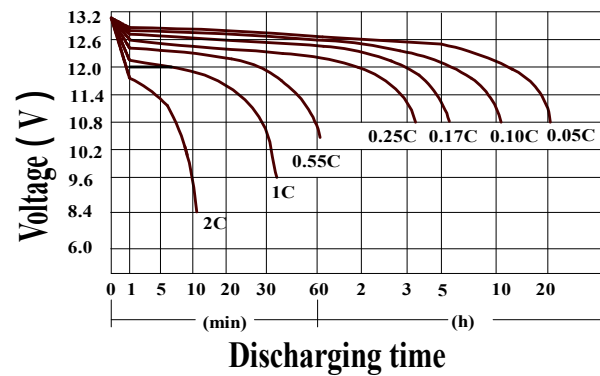
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PERFORMANCE CHARACTERISTICS

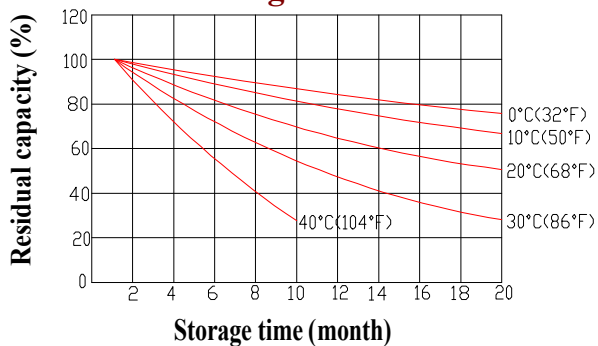
Charging characteristics



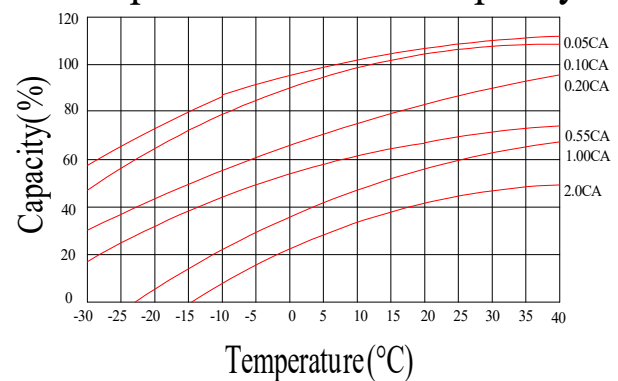
Temperature effect on designed float life

Cycle life vs. Depth of discharge (25°C)Discharge characteristics (25°C)

Temperature effect on battery self-discharge



Temperature effect on capacity



BATTERY CONSTRUCTION

Component	Positive plate	Negative plate	Container & Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	Fire resistant ABS (UL94-V0 optional)	Flame Si-Rubber and aging resistance	Female Copper Insert M8	Advanced PVC / AGM separator for high pressure cell design	Silicon Gel import from Germany	Two layers epoxy resin seal