

## High-Temp Long Life GEL Deep Cycle Battery

## HTB12-28

HTB series uses the newly developed nano gel electrolyte with super-C additive plus heavy duty plates design inside. The HTB series has a long service life and can provide optimum and reliable service under extreme condition such as high temperature and frequent power failure, This series is highly suited for tropical area in outdoor applications such as Telecom BTS stations and Off-grid PV system.

12V  
28Ah

GEL  
Technology

Deep  
Cycle



### Applications

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

### General Features

- ✓ Able to operate at 40-60°C
- ✓ DOD 50% 1500 times Cycles
- ✓ Integrated design to ensure the best Uniformity and reliability
- ✓ Long life and high stability under high temp. environment (no air-con needed)
- ✓ Use super-C additives: Deep discharge recovery capability

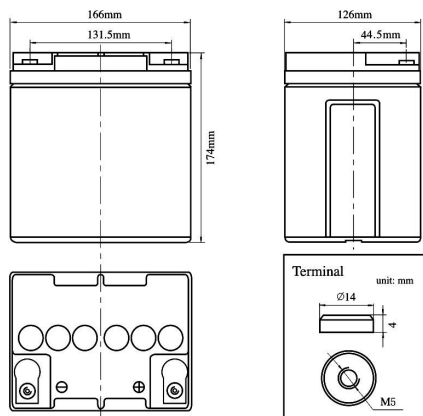


### COMPLIED STANDARDS

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

### Dimensions & Weight

Length (mm)	166±1
Width (mm)	126±1
Height (mm)	174±1
Total Height (mm)	174±1
Weight (kg)	8.5±3%



### Technical Specifications

Nominal Voltage		12V (6 cells per unit)
Design Floating Life @25°C		15 Years
Nominal Capacity @25°C (20 hour rate@1.3A,10.8V)		28Ah
Capacity @25°C	10hour rate (2.3A,10.8V)	23Ah
	5 hour rate (4.1A,10.5V)	20.5Ah
	1 hour rate (15.9A,9.6V)	15.9Ah
Internal Resistance	Full Charged Battery@25°C	≤13.8mΩ
Ambient Temperature	Discharge	-25°C~60°C
	Charge	-25°C~60°C
	Storage	-25°C~60°C
Max.Discharge Current@25°C		156A(5s)
Capacity affected by Temperature (10 hour rate )	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 6A Voltage 13.6-13.8V
	Cycle Use	Initial Charging Current Less than 6A 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	42.0	25.6	17.2	15.9	9.2	6.4	4.4	2.9	2.6	1.40	0.31
1.65V	41.3	25.1	16.8	15.6	9.0	6.3	4.3	2.8	2.5	1.38	0.31
1.70V	40.5	24.7	16.5	15.3	8.8	6.2	4.2	2.8	2.5	1.35	0.30
1.75V	39.7	24.2	16.2	15.0	8.7	6.1	4.1	2.7	2.4	1.33	0.29
1.80V	38.2	23.3	15.6	14.4	8.3	5.9	4.0	2.6	2.3	1.30	0.29

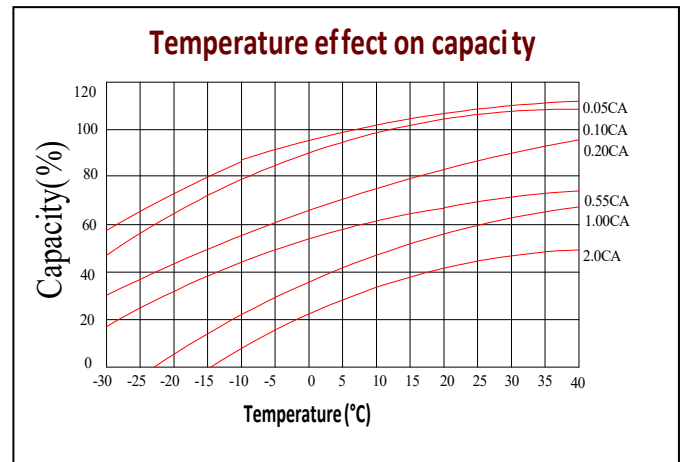
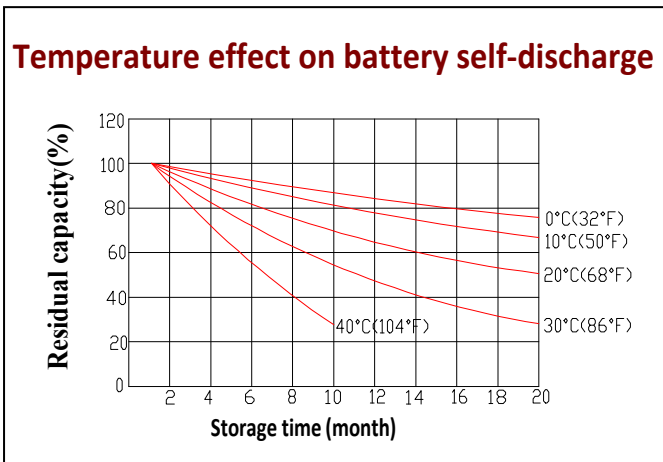
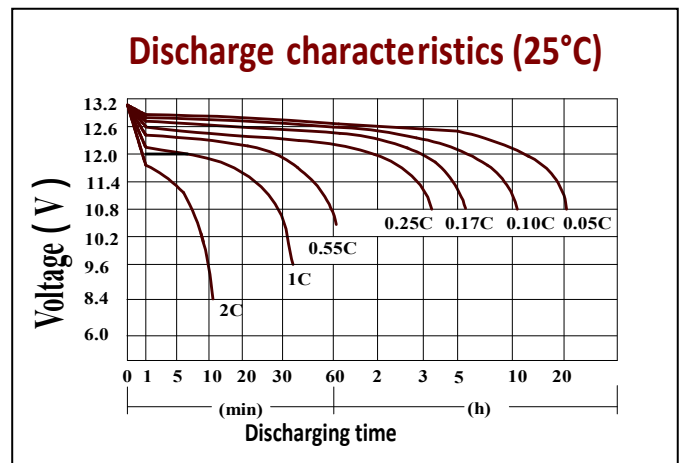
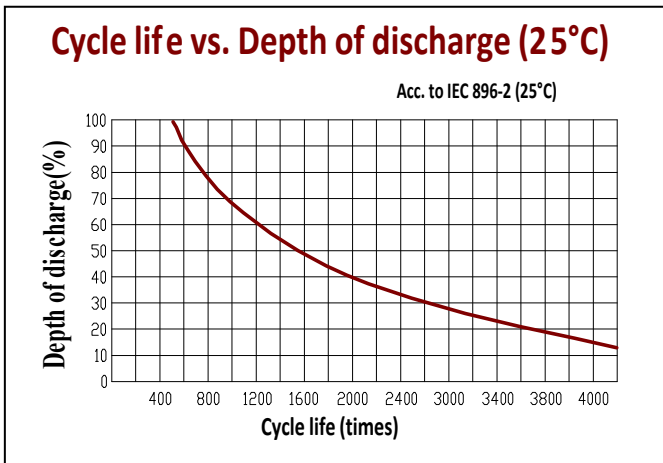
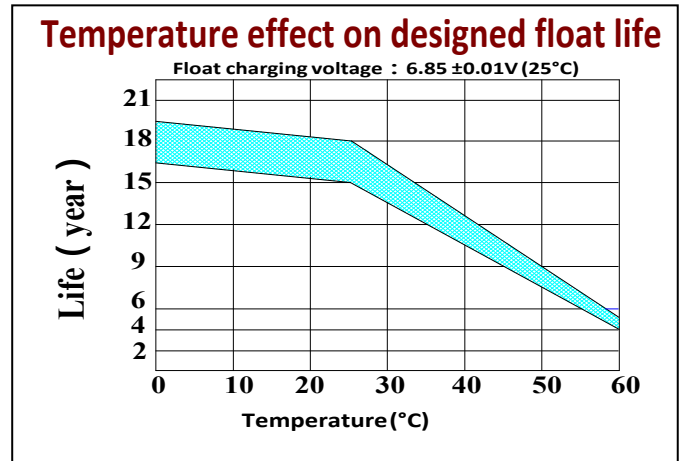
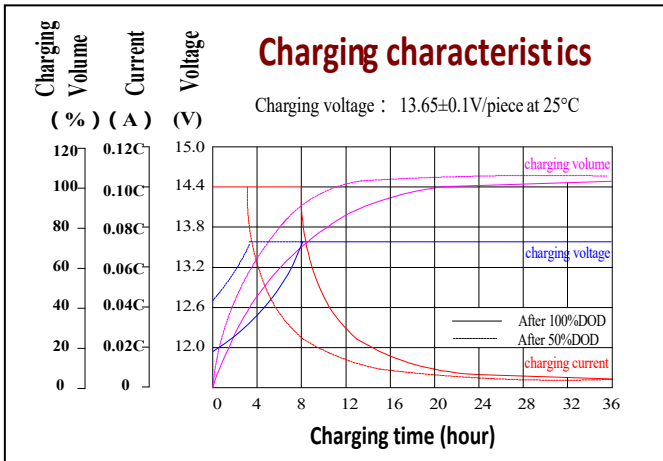
#### Discharge Constant Power per Cell (Watts at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	80.9	49.3	33.0	30.6	17.6	12.4	8.4	5.6	5.0	2.7	0.60
1.65V	79.5	48.4	32.4	30.0	17.3	12.2	8.3	5.5	4.9	2.7	0.59
1.70V	78.0	47.5	31.8	29.4	17.0	11.9	8.1	5.4	4.8	2.6	0.58
1.75V	76.5	46.6	31.2	28.9	16.7	11.7	8.0	5.3	4.7	2.6	0.57
1.80V	73.6	44.8	30.0	27.8	16.0	11.3	7.7	5.1	4.5	2.5	0.56

**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. Contact **CSBattery** for the latest information.

## High-Temp Long Life GEL Deep Cycle Battery HTB12-28

### Performance Characteristics



### 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	Two layers epoxy resin seal

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