

Powered by

Liffttech

CB33-12 ▶ 12V33Ah

CB33-12 is a general purpose battery up to 10 years in standby service or more than 260 cycles at 100% discharge in cycle service. As with all Liffttech batteries, all are rechargeable, highly efficient, leak proof and maintenance free.

► Specification

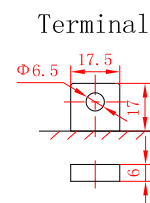
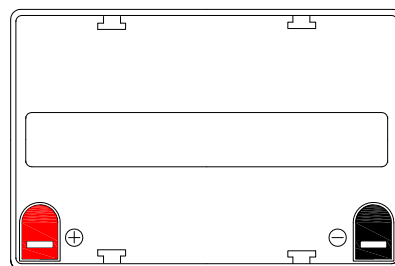
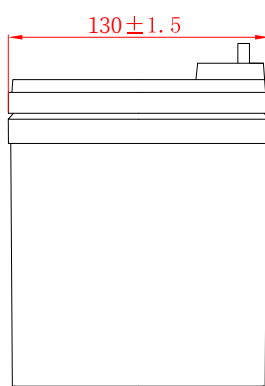
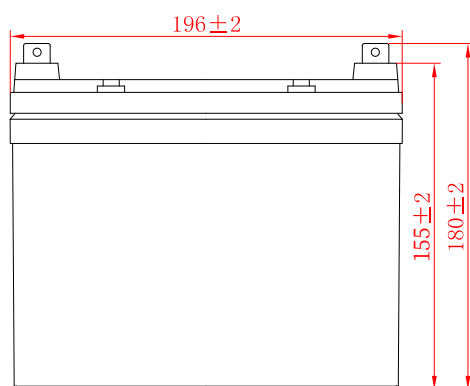
Cells Per Unit	6
Voltage Per Unit	12
Capacity	33Ah @ 10hr-rate to 1.75V per cell @25°C (77°F)
Weight	Approx. 9.4 kg(20.7 lbs)
Maximum Discharge Current	350A(5sec)
Internal Resistance	Approx. 10 mΩ
Operating Temperature Range	Discharge: -15°C~50°C (5°F~122°F) Charge: -15°C~40°C (5°F~104°F) Storage: -15°C~40°C (5°F~104°F)
Nominal Operating Temperature Range	25°C±3°C (77°F±5°F)
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 25°C(77°F)
Recommended Maximum Charging Current Limit	10.5A
Equalization and Cycle Service	14.4 to 14.8 VDC/unit Average at 25°C(77°F)
Self Discharge	This batteries can be stored for more than 6 months at 25°C(77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter.
Terminal	L terminal to accept M6 nut & bolt
Container Material	ABS(UL 94-HB) & Flammability resistance of (UL 94-V0) can be available upon request.

► Dimensions :

Unit: mm

Overall Height (H)	Container height(H)	Length (L)	Width (W)
180±2	155±2	196±2	130±1.5

unit:mm



UL
MH 27774-1

CE
CTK20141211018

TLC

VRLA (Absorbent Glass Mat type) batteries are UL-recognized components under UL1989.

This is also certified by ISO 9001 and ISO 14001.

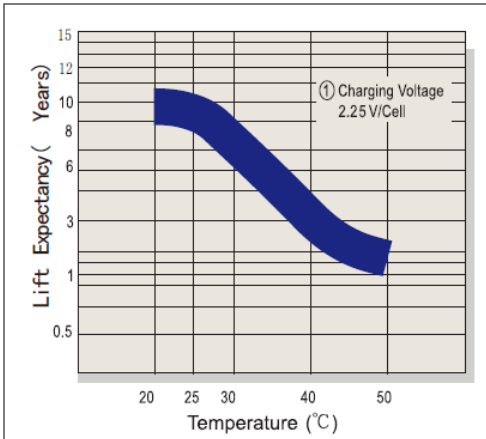
Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

F.V/Time	5min	15min	30min	1h	3h	5h	10h	20h
1.60V	128	69	37.4	22.2	10.2	6.63	3.57	1.87
1.67V	121	67	36.7	21.9	10.0	6.53	3.55	1.87
1.7V	114	66	35.8	21.5	9.8	6.39	3.53	1.86
1.75V	106	63	34.7	20.9	9.5	6.19	3.50	1.84
1.8V	96	59	33.1	20.0	9.0	5.92	3.42	1.81
1.85V	83	52	31.1	18.5	8.2	5.46	3.28	1.75

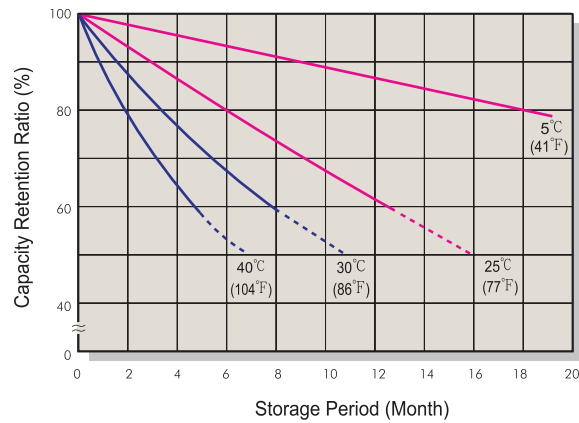
Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

F.V/Time	5min	15min	30min	1h	3h	5h	10h	20h
1.60V	197	126	72.3	42.2	20.1	12.9	7.02	3.72
1.67V	188	119	71.0	41.7	19.8	12.8	6.99	3.71
1.7V	176	111	69.5	41.1	19.4	12.6	6.94	3.69
1.75V	159	102	67.4	40.2	18.7	12.2	6.86	3.65
1.8V	136	90	64.6	39.1	17.7	11.7	6.71	3.59
1.85V	106	76	60.6	36.8	16.4	10.9	6.49	3.49

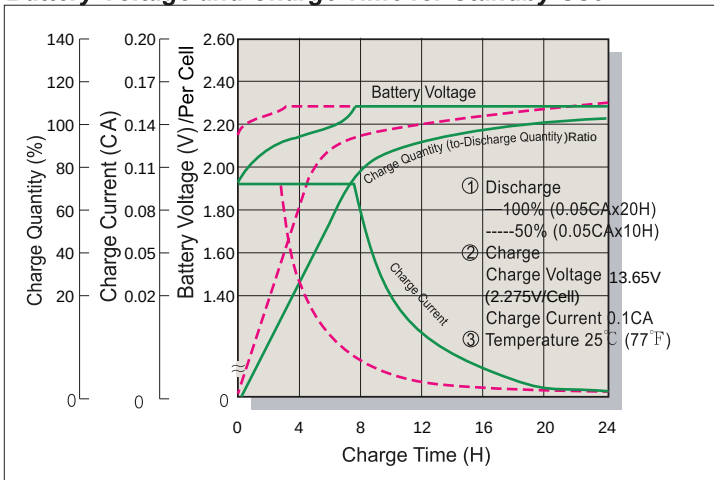
Trickle(or Float)Design Life



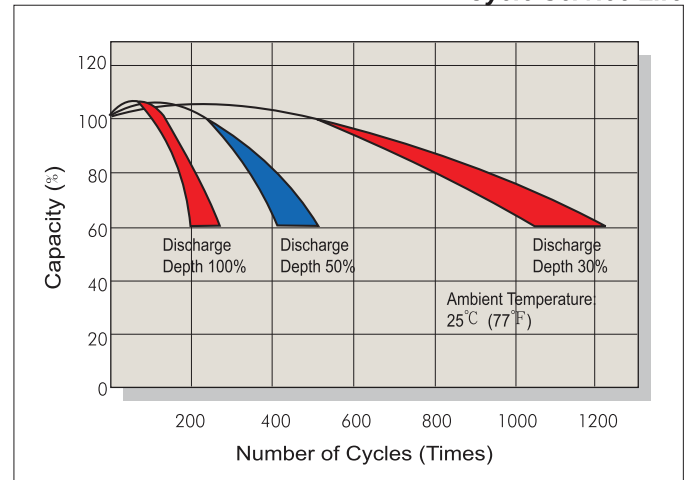
Capacity Retention Characteristic



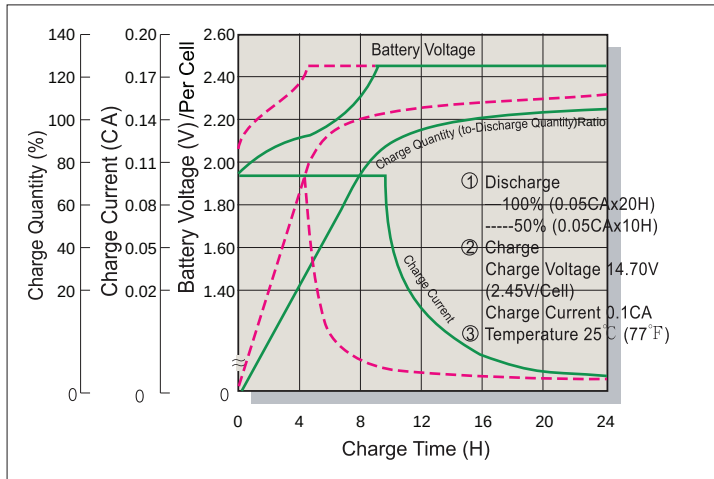
Battery Voltage and Charge Time for Standby Use



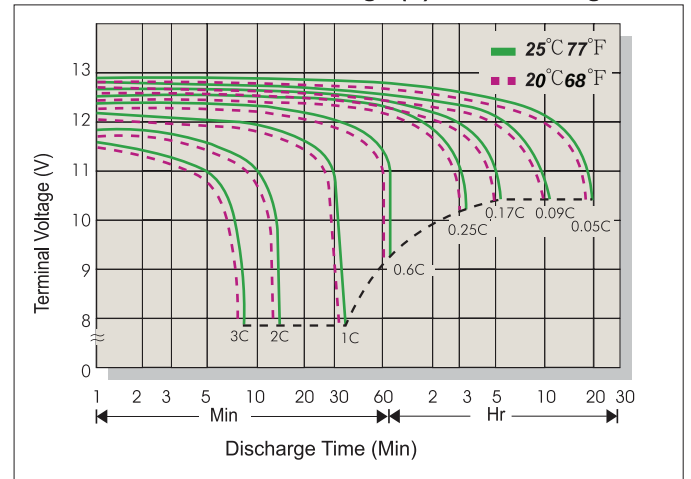
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



Terminal Voltage (V) and Discharge Time



Charging Procedures

Application	Charge Voltage(V/Cell)			Max.Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C (77°F)	2.45	2.40~2.50	0.3C
Standby	25°C (77°F)	2.275	2.25~2.30	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.65	1.60
Discharge Current(A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C

Effect of temperature on capacity (20HR)

Temperature	Dependency of Capacity (20HR)
40 °C	102%
25 °C	100%
0 °C	85%
-15 °C	65%

Self-discharge Characteristics

Storage time	Preservation rate
3 Months	91%
6 Months	82%
12 Months	64%