

# GP 12650

## 12V 65Ah

GP 12650 is a general purpose battery up to 5 years in standby service or more than 260 cycles at 100% discharge in cycle service. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



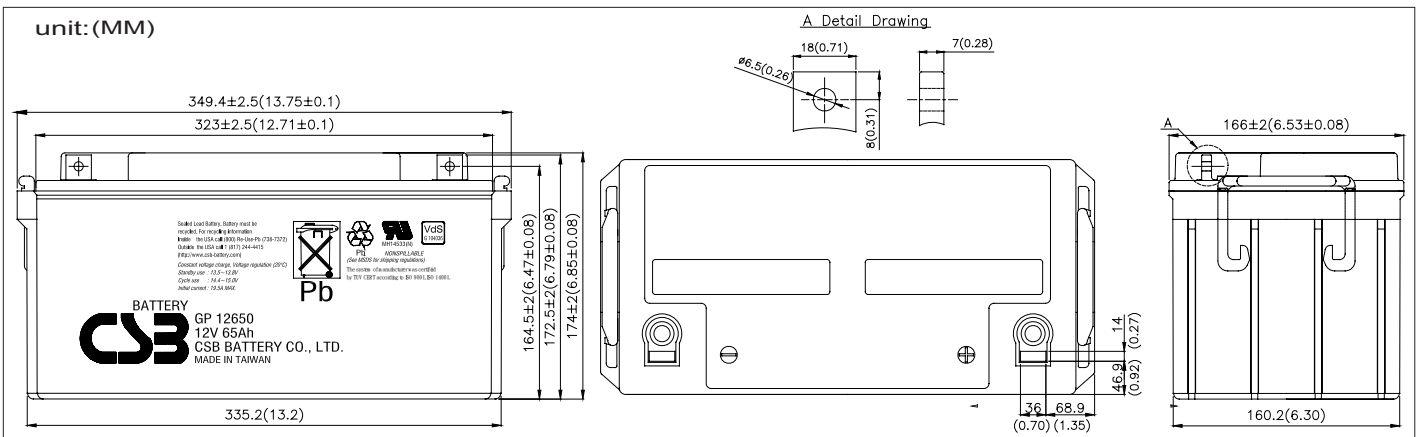
### Specification

<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	65Ah @ 20hr-rate to 1.75V per cell @25°C (77°F)
<b>Weight</b>	Approx. 20 kg(44.09 lbs)
<b>Maximum Discharge Current</b>	500A(5sec)
<b>Internal Resistance</b>	Approx. 6 mΩ
<b>Operating Temperature Range</b>	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)
<b>Nominal Operating Temperature Range</b>	25°C±3°C(77°F±5°F)
<b>Float Charging Voltage</b>	13.5 to 13.8 VDC/unit Average at 25°C(77°F)
<b>Recommended Maximum Charging</b>	19.5A
<b>Current Limi</b>	
<b>Equalization and Cycle Service</b>	14.4 to 15.0 VDC/unit Average at 25°C(77°F)
<b>Self Discharge</b>	CSB 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.
<b>Terminal</b>	B4-L terminal to accept M6 nut & bolt
<b>Container Material</b>	Polypropylene(UL 94-V0/File E50955)*Flammability resistance of (UL 94-HB/File E216959) can be available upon request.



CSB-manufactured batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

### Dimensions



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

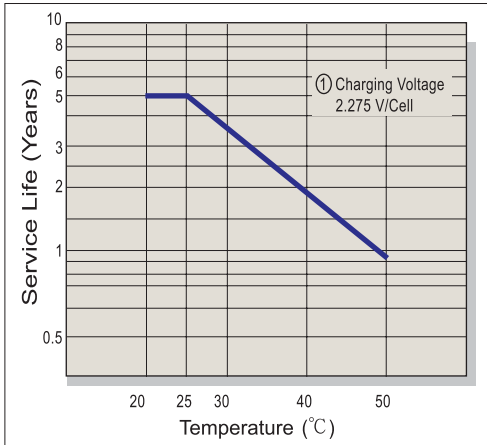
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	271	173	132	79.9	47.2	27.3	19.4	15.1	12.4	8.08	6.58	3.57
1.67V	242	162	124	78.3	46.9	27.2	19.3	15.0	12.3	7.98	6.48	3.42
1.70V	229	157	121	77.3	46.7	27.1	19.2	14.9	12.2	7.93	6.43	3.36
1.75V	208	147	117	75.4	46.4	27.0	19.1	14.8	12.1	7.86	6.32	3.25
1.80V	186	137	111	73.4	45.9	26.9	19.0	14.7	12.0	7.76	6.21	3.14
1.85V	164	127	105	71.3	45.4	26.8	18.9	14.6	11.9	7.66	6.10	3.03

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

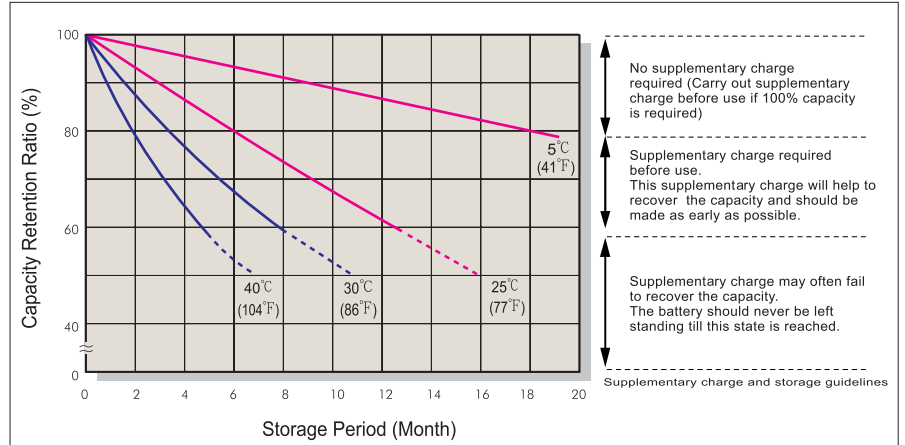
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	3,250	2,080	1,580	959	566	327	232	181	148	97.0	79.0	40.9
1.67V	2,900	1,940	1,503	935	562	326	231	180	147	96.0	77.7	39.2
1.70V	2,750	1,871	1,460	924	560	325	230	179	146	95.5	77.1	38.4
1.75V	2,490	1,760	1,400	903	555	324	229	178	145	94.3	75.8	37.1
1.80V	2,230	1,640	1,330	881	550	323	228	177	144	93.1	74.5	35.7
1.85V	1,970	1,520	1,260	856	545	322	227	176	143	91.9	73.2	34.4

• All mentioned values are average values.

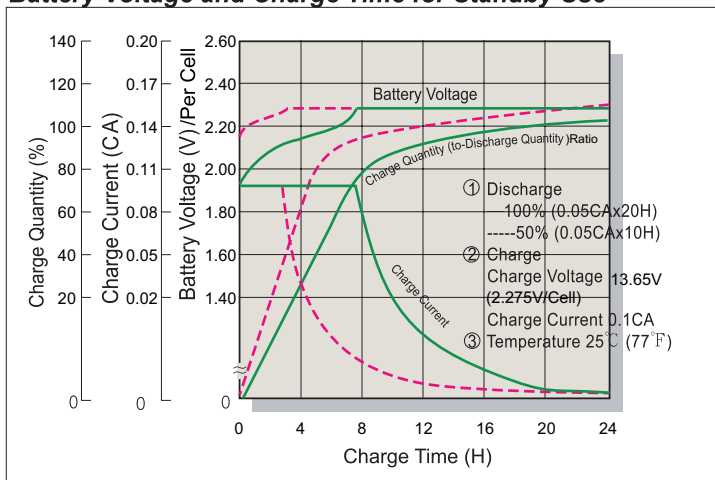
### Trickle (or Float) Service Life



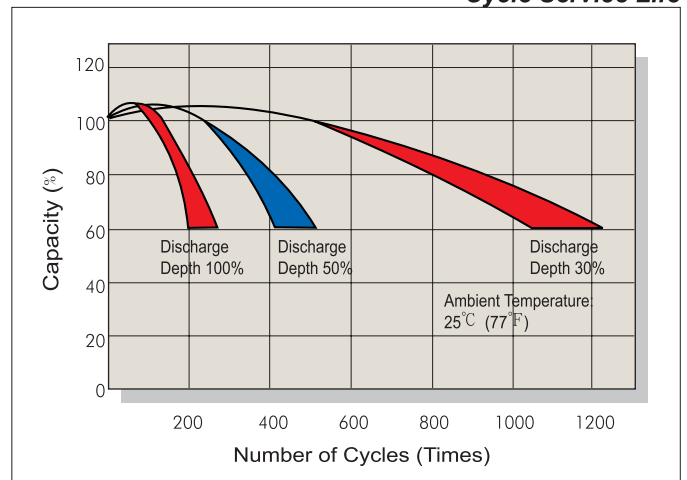
### Capacity Retention Characteristic



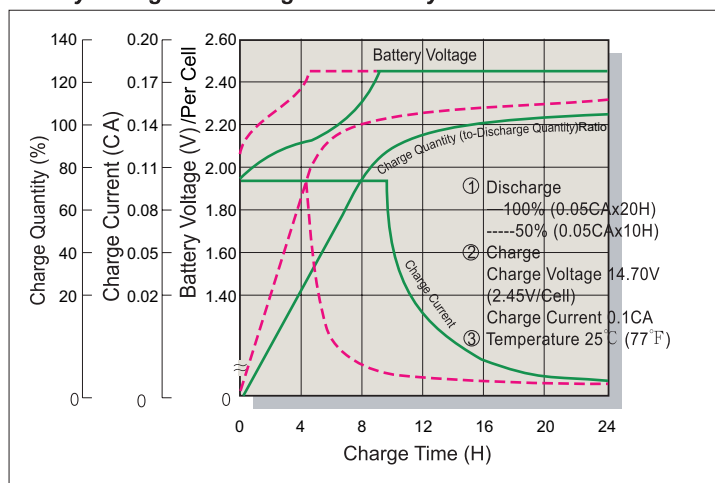
### Battery Voltage and Charge Time for Standby Use



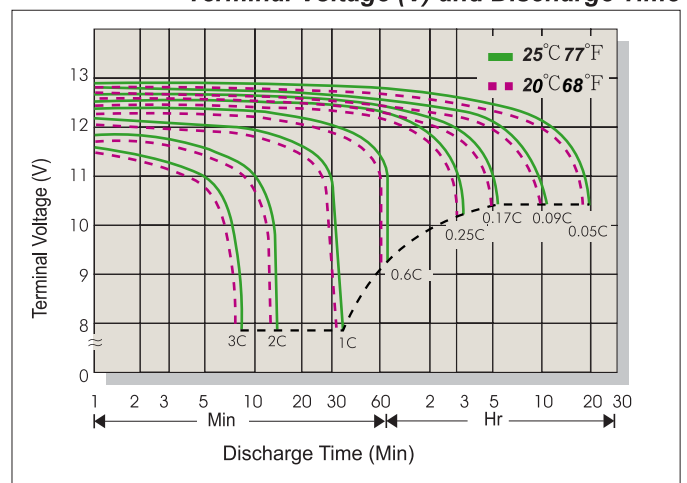
### Cycle Service Life



### 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	1.60	1.30
Discharge Current(A)	0.2C > (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

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