



# GPL 12400

## 12V 40Ah

GPL 12400 is a general purpose battery up to 10 years expected life under normal float charge. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



### Specification

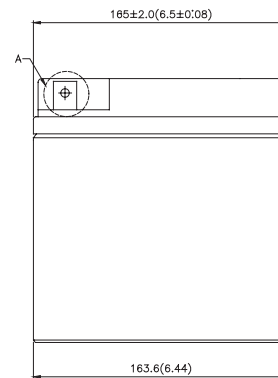
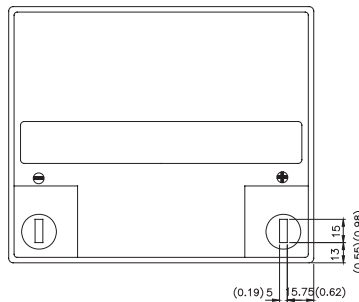
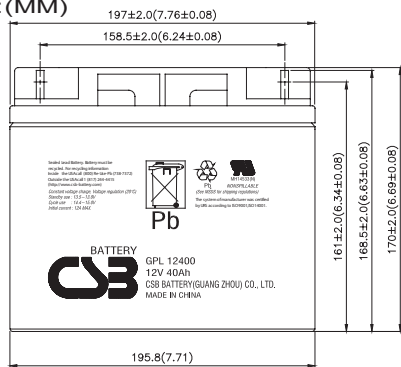
Cells Per Unit	6
Voltage Per Unit	12
Capacity	40Ah @ 20hr-rate to 1.75V per cell @25 °C (77°F)
Weight	Approx. 14.5 kg (31.97 lbs)
Maximum Discharge Current	400A(5sec)
Internal Resistance	Approx. 7 mΩ
Operating Temperature Range	Discharge: -15°C~50°C ( 5°F~122°F) Charge: -15 °C~40°C ( 5°F~104°F) Storage: -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	12A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C (77°F)
Self Discharge	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.
Terminal	B2-L terminal to accept M5 nut & bolt
Container Material	ABS(UL 94-HB/File E50263)*Flammability resistance of (UL 94-V0/File E88637) can be available upon request.



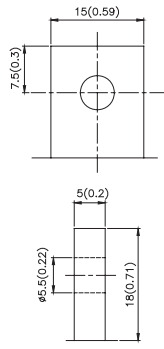
CSB-manufactured batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

### Dimensions

unit: (MM)



A Detail Drawing



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

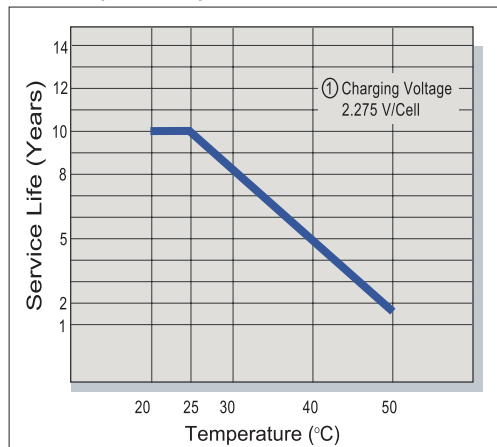
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	179	123	92.6	53.1	30.9	18.0	13.0	9.95	7.99	5.17	4.18	2.09
1.67V	163	116	88.9	51.5	29.9	17.8	12.7	9.73	7.86	5.08	4.14	2.07
1.70V	156	113	87.0	50.8	29.4	17.6	12.6	9.59	7.80	4.98	4.09	2.05
1.75V	143	106	83.0	49.4	28.8	17.3	12.3	9.42	7.67	4.89	4.04	2.02
1.80V	132	98.7	79.0	47.9	28.0	16.9	12.0	9.25	7.52	4.79	4.00	2.00
1.85V	118	91.0	74.6	46.0	27.0	16.5	11.7	9.02	7.38	4.70	3.90	1.97

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

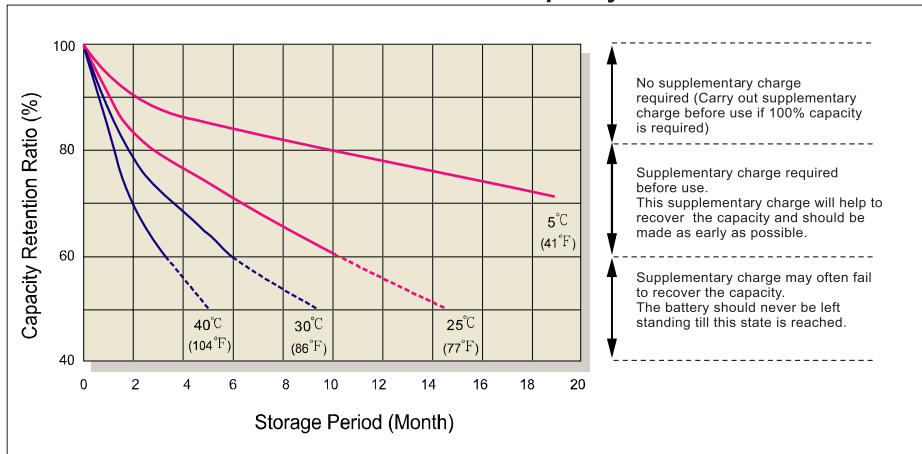
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	1,912	1,368	1,026	604	350	198	140	112	93.5	60.4	48.8	24.3
1.67V	1,745	1,288	983	584	341	192	136	109	91.3	59.2	48.3	24.2
1.70V	1,668	1,253	964	577	335	189	135	108	90.2	58.7	48.0	24.1
1.75V	1,554	1,188	925	562	325	185	133	106	88.5	57.9	47.7	23.9
1.80V	1,433	1,115	887	546	315	180	130	103	86.5	57.0	47.4	23.7
1.85V	1,326	1,040	849	528	307	176	126	101	84.3	56.3	46.8	23.7

• All mentioned values are average values.

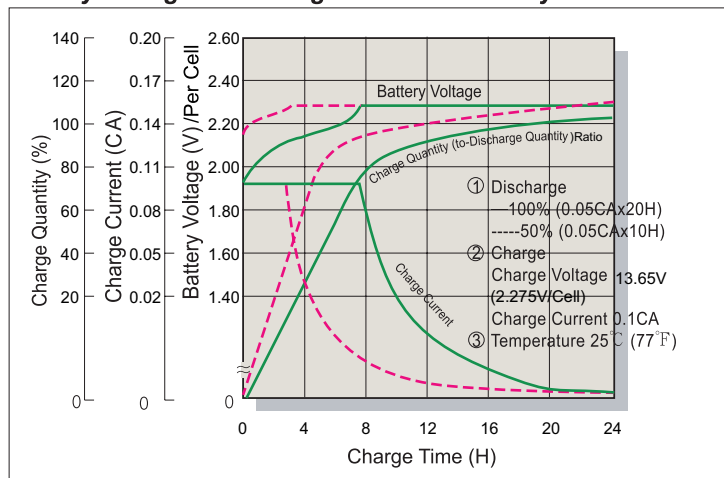
### Trickle (or Float) Service Life



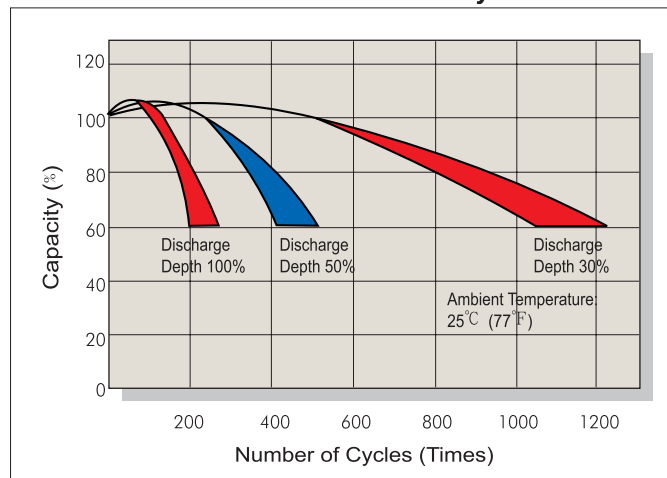
### Capacity Retention Characteristic



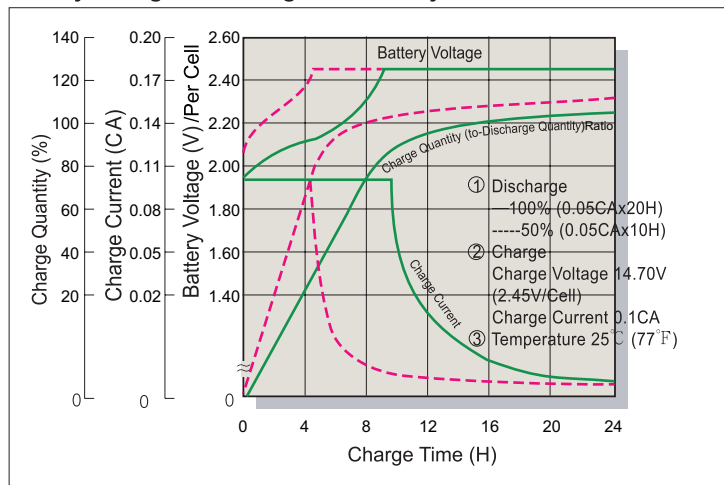
### Battery Voltage and Charge Time for Standby Use



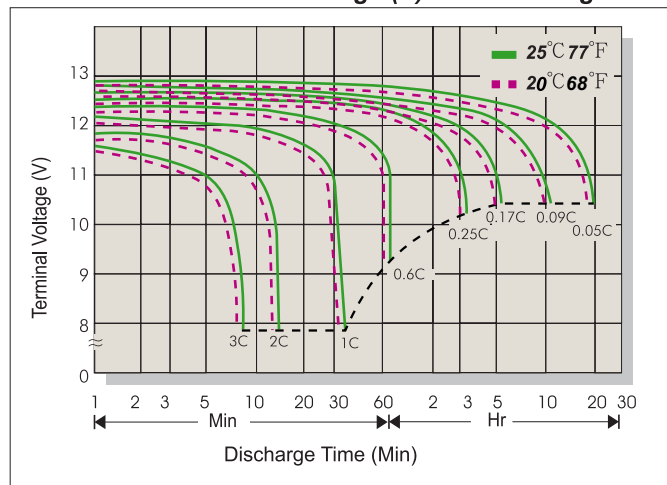
### Cycle Service Life



### 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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