



GPL 12400

12V 40.0Ah

GPL 12400 is a general purpose battery with 8~10 years expected life under normal float charge. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



Specification

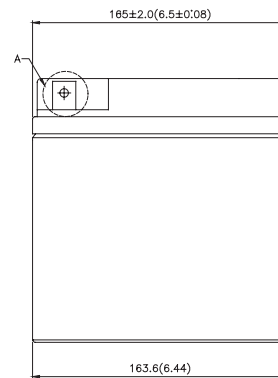
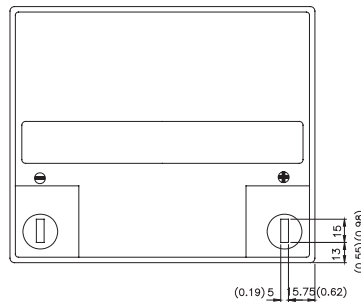
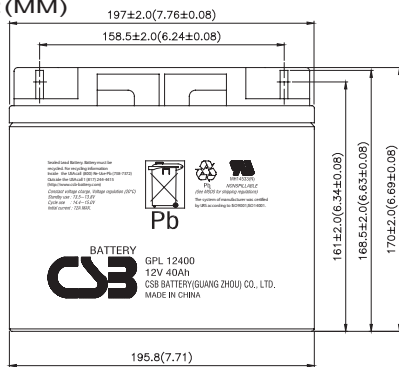
Cells Per Unit	6
Voltage Per Unit	12
Capacity	40Ah @ 20hr-rate to 1.75V per cell @25 °C (77°F)
Weight	Approx. 14.5kg (31.9 lbs)
Maximum Discharge Current	400A (5sec)
Internal Resistance	Approx. 7.0mΩ
Operating Temperature Range	Discharge: -15°C~50°C (5°F~122°F) Charge: -15~40°C (5°F~104°F) Storage: -15°C~40°C (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	12.0A
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	Thread lead L-Type terminal (nut & bolt) to accept M6-20bolt
Container Material	They are made from high quality ABS plastics (UL 94 HB/File E50263) and are well insulated.



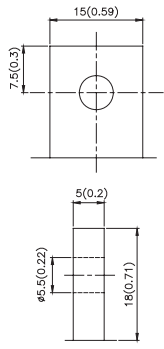
CSB-manufactured batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

Dimensions

unit: (MM)



A Detail Drawing



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

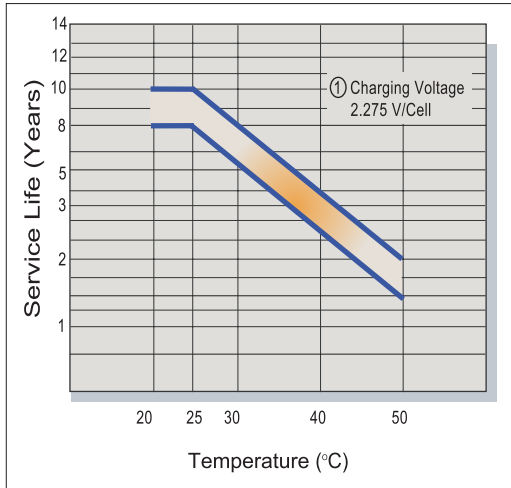
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	178.60	126.90	92.59	53.11	30.08	18.05	14.10	9.40	7.99	5.17	4.18	2.09
1.67V	167.32	122.20	90.71	51.70	29.61	17.86	13.91	9.31	7.90	5.08	4.14	2.07
1.70V	155.10	115.62	89.30	50.76	28.67	17.67	13.63	9.21	7.80	4.98	4.09	2.05
1.75V	145.70	108.10	84.60	49.35	27.73	17.39	13.44	9.12	7.71	4.89	4.04	2.02
1.80V	131.60	98.70	78.96	47.94	26.79	16.92	13.16	9.02	7.52	4.79	4.00	2.00
1.85V	117.50	84.60	73.32	43.71	25.38	16.45	12.22	8.84	7.38	4.70	3.90	1.97

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

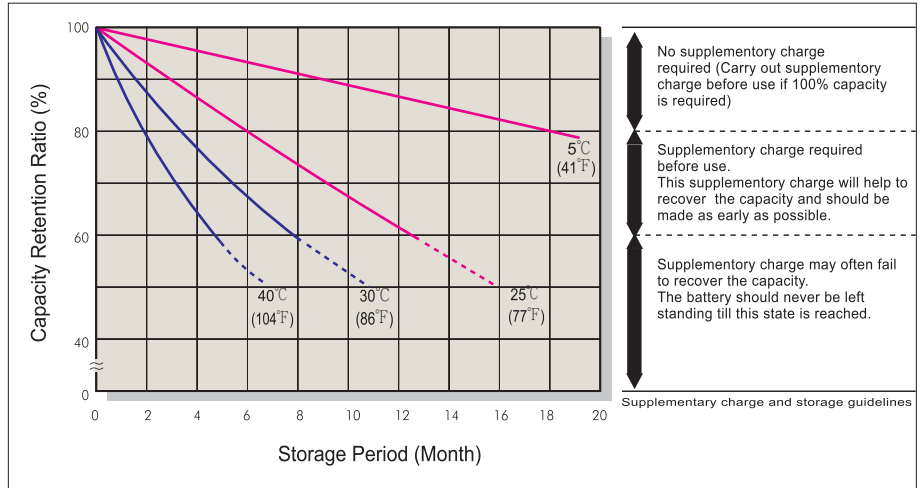
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	1,911.98	1,387.97	1,025.70	604.46	349.74	212.10	164.37	109.36	93.53	60.37	48.78	24.35
1.67V	1,807.34	1,333.09	948.18	590.19	345.88	210.00	163.18	108.96	92.53	59.49	48.44	24.21
1.70V	1,683.00	1,274.94	904.45	579.95	335.01	207.91	160.00	107.99	91.55	58.58	48.05	24.09
1.75V	1,601.39	1,199.04	908.28	567.64	324.96	204.93	158.32	107.23	90.91	57.63	47.71	23.86
1.80V	1,467.12	1,114.94	903.25	557.25	314.89	199.54	155.29	106.56	88.82	56.72	47.36	23.74
1.85V	1,326.34	967.51	849.00	514.20	301.87	196.30	145.91	105.58	88.18	56.27	46.79	23.68

• All mentioned values are average values.

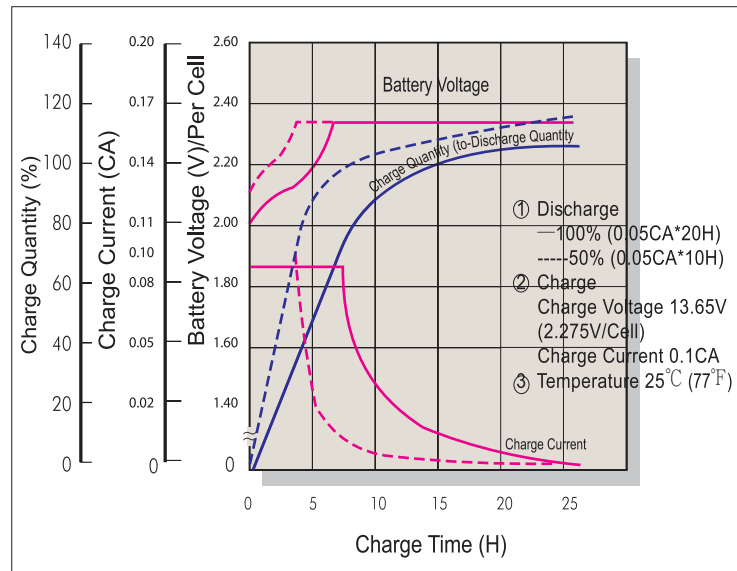
Trickle (or Float) Service Life



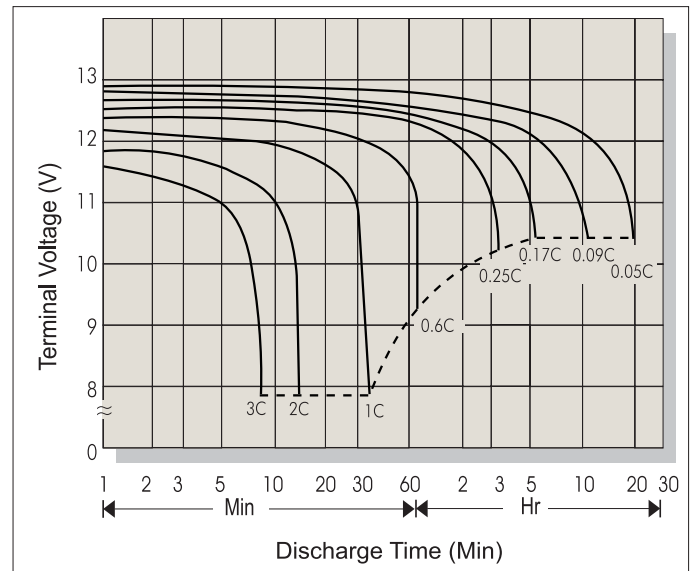
Capacity Retention Characteristic



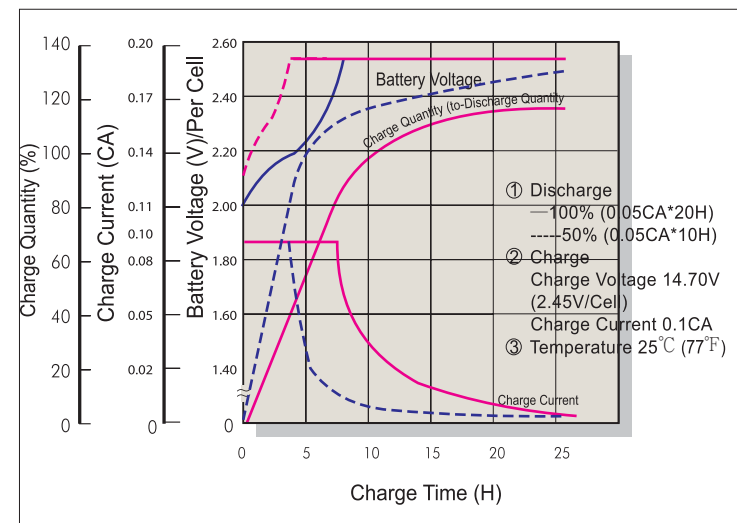
Battery Voltage and Charge Time for Standby Use



Terminal Voltage (V) and Discharge Time (25°C 77°F)



Battery Voltage and Charge Time for Cycle Use



Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.55	1.30
Discharge Current (A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C

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	

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