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# GPL 12120 ▶ 12V 12Ah

GPL 12120 is a general purpose battery up to 8 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>	12 Ah @ 20hr-rate to 1.75V per cell @25°C (77°F)
<b>Weight</b>	Approx. 4.1 kg(9.04 lbs)
<b>Maximum Discharge Current</b>	150A/180A(5sec)
<b>Internal Resistance</b>	Approx. 14 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 Current Limit</b>	3.6A
<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>	F1/F2-Faston Tab 187/250
<b>Container Material</b>	ABS(UL 94-HB/File E50263)*Flammability resistance of (UL 94-V0/File E88637) can be available upon request.



MH14533(N)



No.:041005117



ISO 14001  
NO.UM 1-12-0045

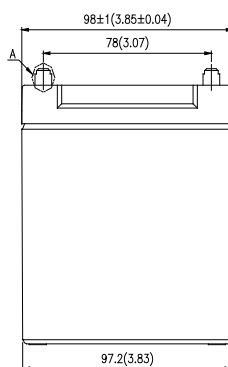
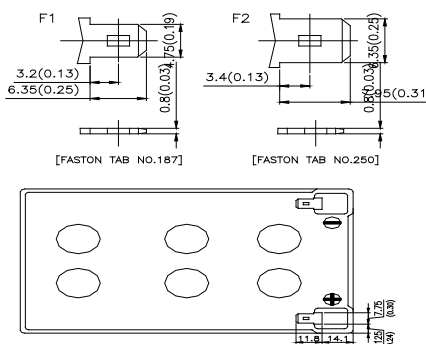
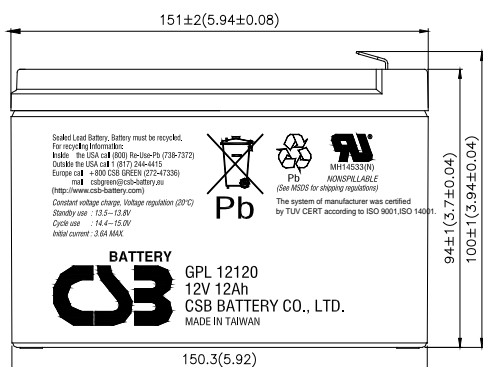
CSB-manufactured VRLA batteries are UL-recognized components under UL924 and UL1989.

CSB is also certified by ISO9001 and ISO14001.

## ► Dimensions :

Unit: mm (inch)	Overall Height (H)	Container height (h)	Length (L)	Width (W)
	100±1 (3.94±0.04)	94±1 (3.7±0.04)	151±2 (5.94±0.08)	98±1 (3.85±0.04)

A Detail Drawing



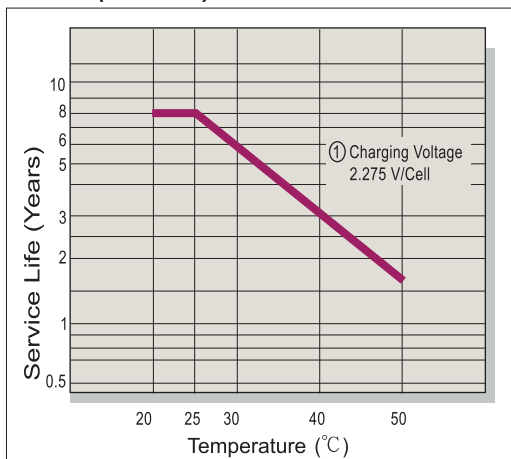
## Constant Current Discharge Characteristics Unit:A (25°C,77°F)

F.V/Time	5MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	45.7	32.1	23.1	13.5	7.42	5.16	3.99	2.84	1.83	1.25	1.03	0.61
1.67V	44.0	31.4	23.0	13.4	7.32	5.11	3.96	2.81	1.83	1.24	1.01	0.61
1.70V	42.8	30.8	22.6	13.2	7.27	5.08	3.94	2.80	1.81	1.23	1.00	0.60
1.75V	40.3	29.4	21.9	13.0	7.14	5.00	3.88	2.76	1.80	1.22	1.00	0.60
1.80V	37.6	27.5	20.7	12.6	6.92	4.87	3.80	2.70	1.77	1.20	0.97	0.59
1.85V	33.8	24.8	19.0	11.7	6.55	4.64	3.63	2.59	1.70	1.14	0.93	0.56

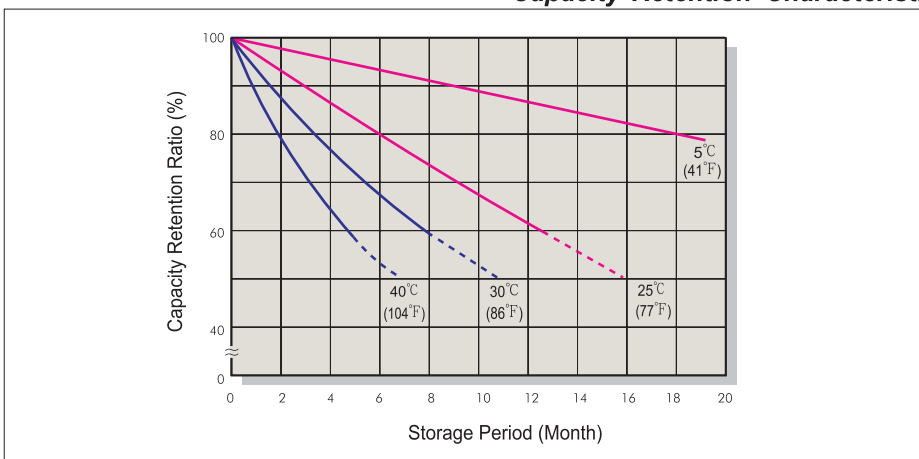
## Constant Power Discharge Characteristics Unit:W (25°C,77°F)

F.V/Time	5MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	487	343	258	152	84.6	59.9	46.9	33.4	21.7	14.7	12.2	6.30
1.67V	475	339	255	151	84.5	59.7	46.6	33.2	21.6	14.6	12.1	6.24
1.70V	466	333	252	150	84.1	59.2	46.1	33.1	21.5	14.5	12.0	6.23
1.75V	443	322	246	149	83.5	58.9	46.0	32.9	21.4	14.4	11.8	6.19
1.80V	416	306	235	144	81.0	57.4	44.9	32.0	21.0	14.2	11.6	6.09
1.85V	380	280	217	135	77.0	54.8	43.0	30.7	20.4	13.7	11.2	5.85

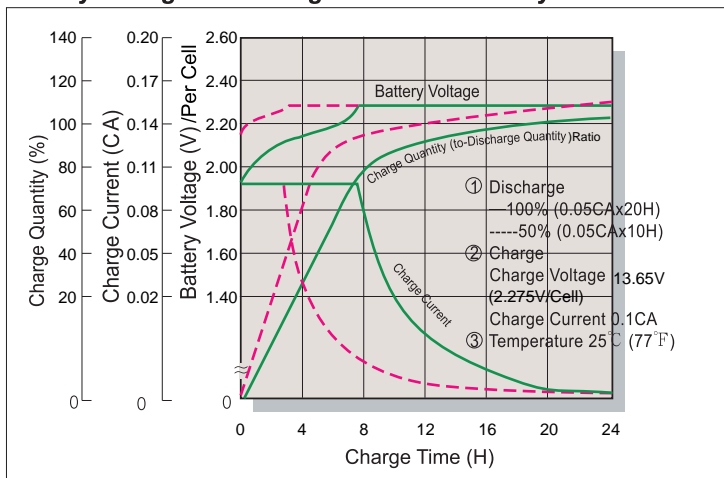
### Trickle (or Float) Service Life



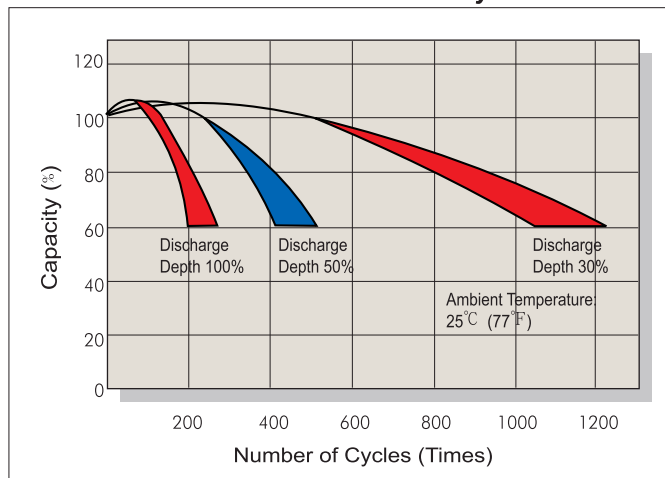
### Capacity Retention Characteristic



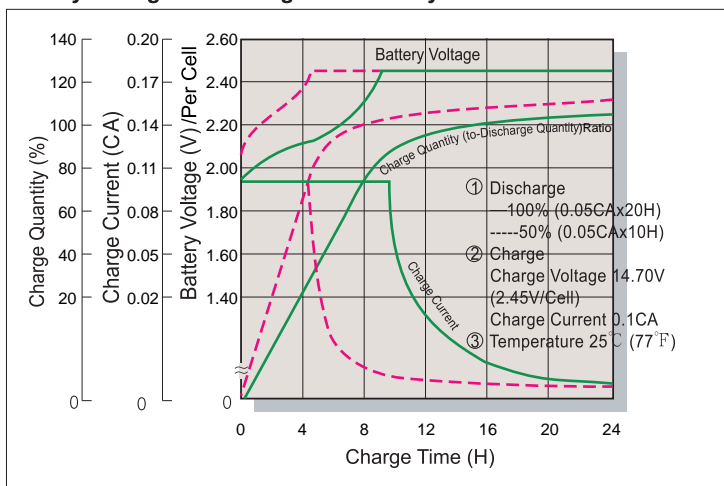
### Battery Voltage and Charge Time for Standby Use



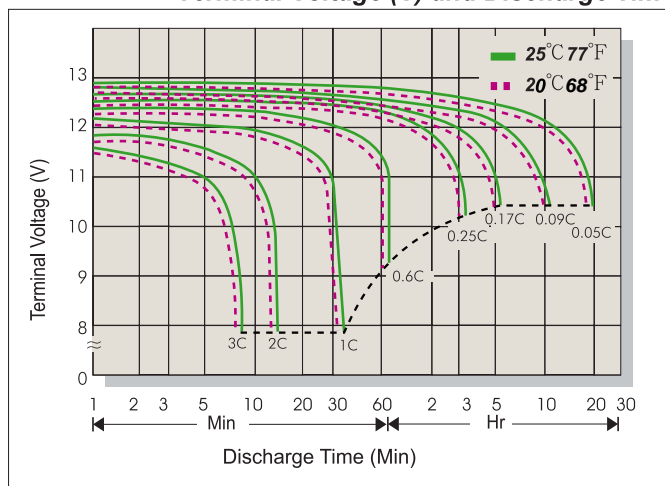
### Cycle Service Life



### 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 < (A)	0.5C < (A) < 1.0C > 1.0C

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