

# GP 1245

## 12V 4.5Ah

GP 1245 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.



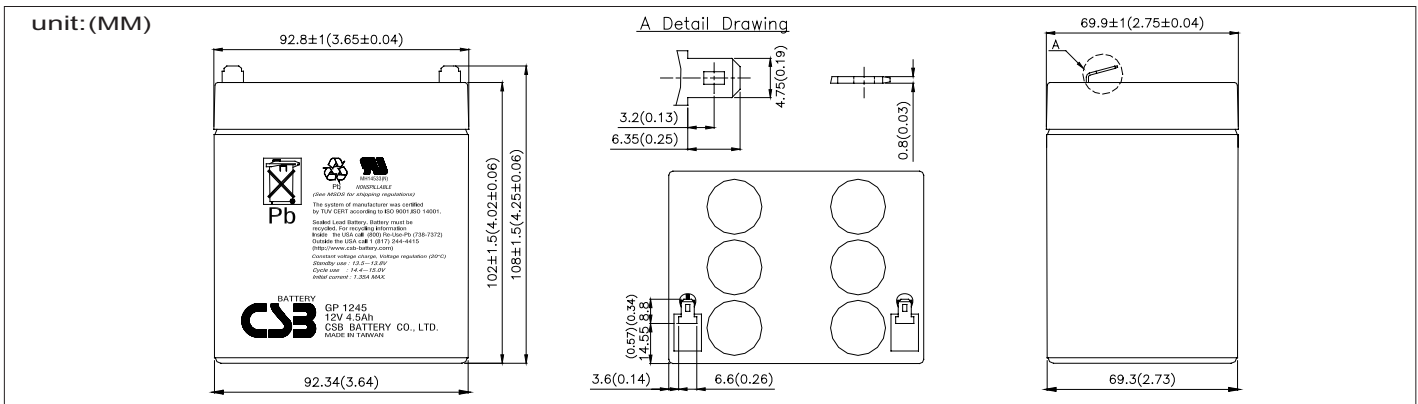
### Specification

<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	4.5Ah @ 20hr-rate to 1.75V per cell @25 °C(77°F)
<b>Weight</b>	Approx. 1.66 kg(3.66 lbs)
<b>Maximum Discharge Current</b>	60A/90A(5sec)
<b>Internal Resistance</b>	Approx. 40.5mΩ
<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>	1.35A
<b>Current Limit</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>	F1/F2-Faston Tab187/250
<b>Container Material</b>	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



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

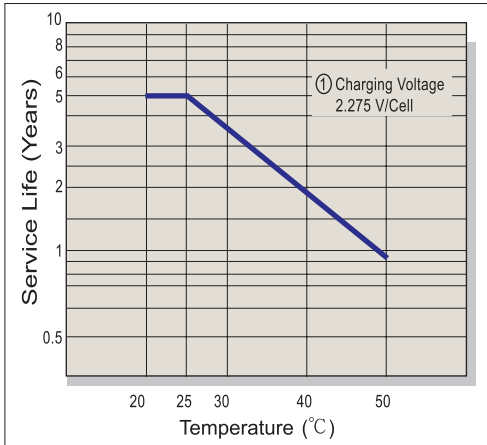
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	21.1	13.1	9.57	5.47	3.24	1.88	1.35	1.07	0.902	0.606	0.501	0.272
1.67V	19.6	12.6	9.21	5.36	3.20	1.86	1.34	1.06	0.892	0.601	0.498	0.271
1.70V	18.8	12.4	9.05	5.29	3.19	1.85	1.33	1.05	0.882	0.599	0.497	0.267
1.75V	17.6	11.8	8.79	5.17	3.16	1.84	1.32	1.04	0.872	0.593	0.495	0.266
1.80V	16.4	11.3	8.52	5.05	3.12	1.82	1.31	1.03	0.862	0.589	0.491	0.263
1.85V	15.2	10.7	8.24	4.95	3.02	1.78	1.29	1.01	0.846	0.581	0.482	0.257

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

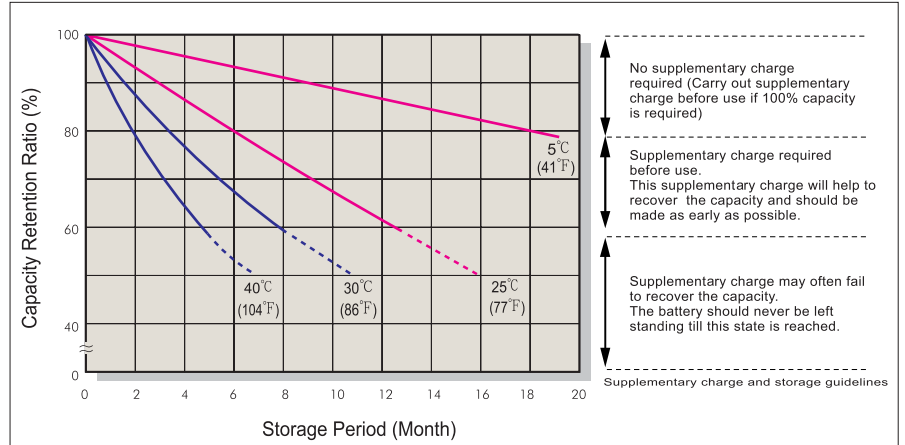
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	221	145	110	65.9	38.6	22.2	16.1	12.8	10.7	7.10	5.80	3.19
1.67V	206	139	107	65.4	38.4	22.0	16.0	12.7	10.6	7.08	5.78	3.18
1.70V	199	137	105	64.9	38.1	21.9	15.9	12.6	10.5	7.04	5.77	3.17
1.75V	188	133	102	64.7	38.0	21.8	15.8	12.5	10.4	7.03	5.74	3.16
1.80V	177	128	100	63.6	37.7	21.5	15.7	12.4	10.3	6.97	5.72	3.13
1.85V	165	122	96.6	60.9	36.7	21.3	15.5	12.3	10.2	6.89	5.64	3.09

• All mentioned values are average values.  
 • Tolerance: X<6min(+15%~-15%),6min ≤ X<10min(+12%~-12%),10min ≤ X<60min(+8%~-8%),X ≥ 60min(+5%~-5%)

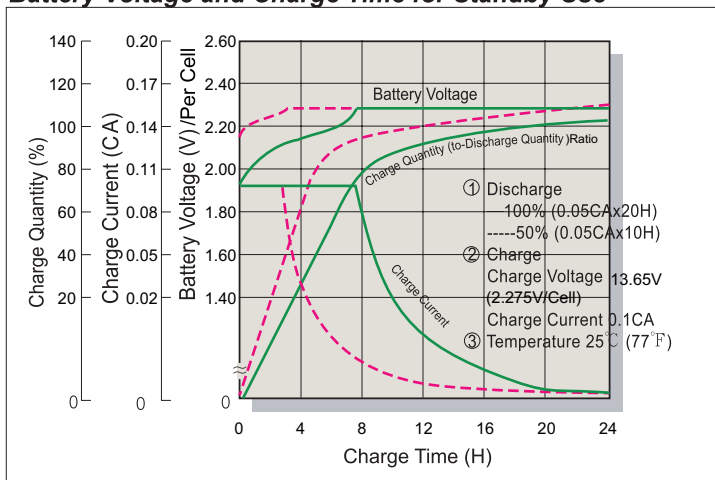
### Trickle (or Float) Service Life



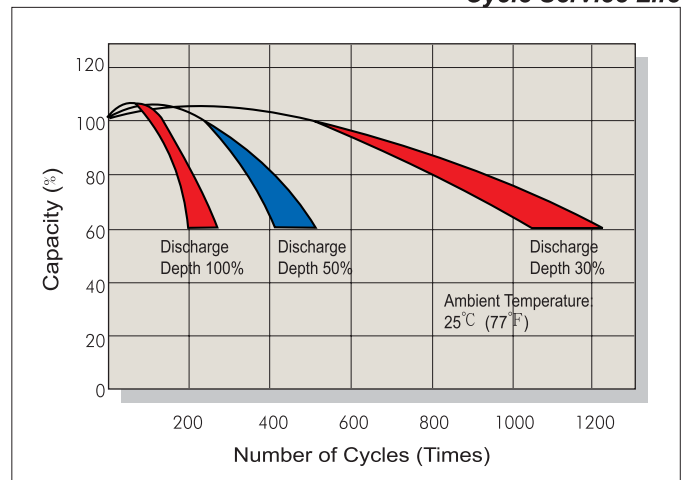
### Capacity Retention Characteristic



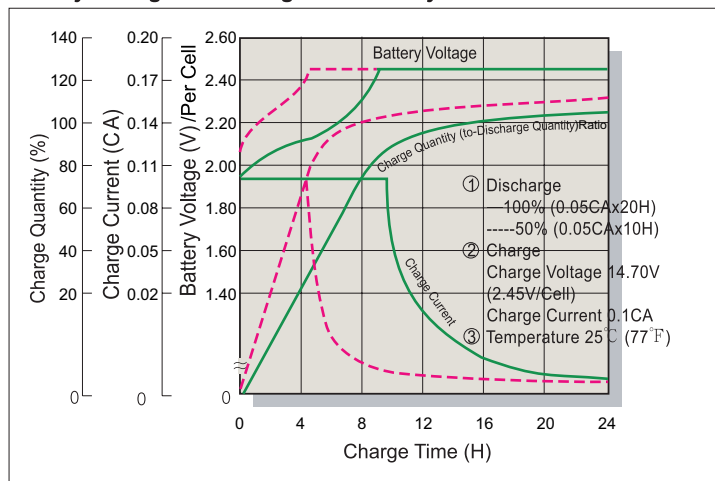
### Battery Voltage and Charge Time for Standby Use



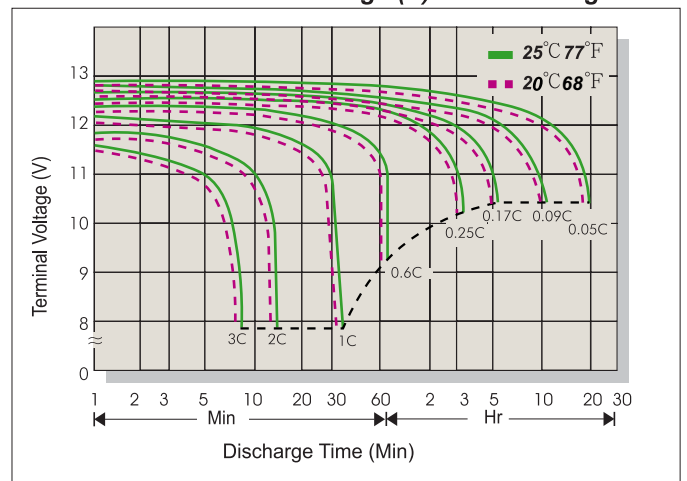
### Cycle Service Life



### 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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