

HR 1290W

12V 90W

HR 1290W is specially designed for high efficient discharge application. Its characteristics are high energy density, small footprint and high discharge efficiency. It can be used for more than 260 cycles at 100% discharge in cycle service, up to 5 years in standby service.

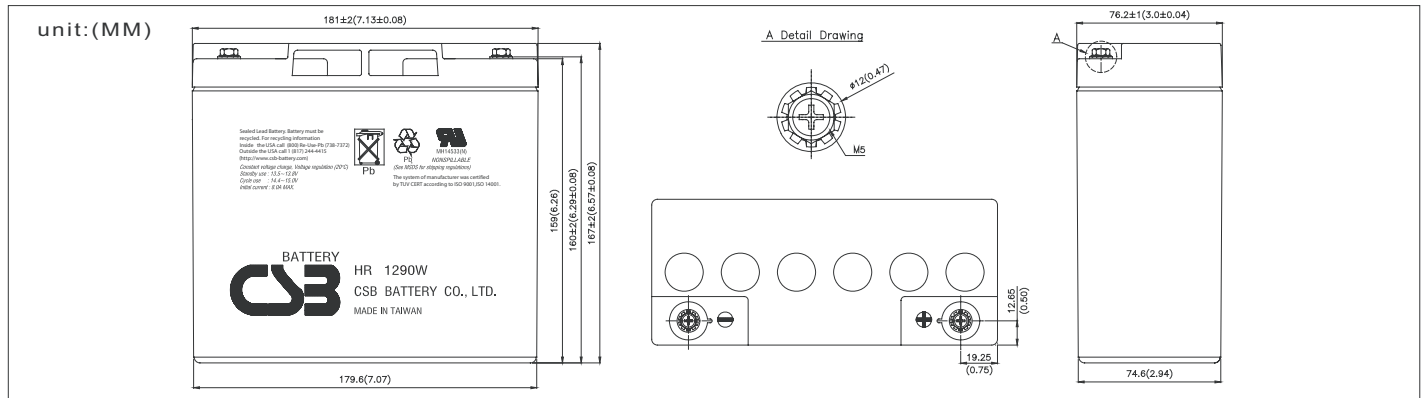


Specification

Cells per unit	6
Voltage per unit	12
Capacity	90W @15 min-rate to 1.67V per cell @25 °C (77°F) 23Ah@ 20hr-rate to 1.75V per cell @25°C(77°F)
Weight	Approx. 6.75 kg(14.88 lbs)
Maximum Discharge Current	300A(5sec)
Internal Resistance Approx.	Approx. 9 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	9A
Current Limit	
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	I1-Thread lead alloy recessed terminal to accept M5 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 as well as ISO 9001 and ISO 14001 certified.

Dimensions



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

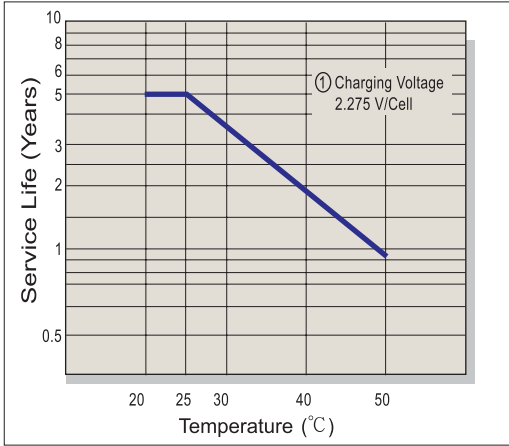
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	177	124	95.8	79.4	68.0	48.7	38.4	27.3	15.8	11.5
1.67V	156	114	90.2	77.6	65.2	48.4	38.1	27.0	15.7	11.4
1.70V	147	109	87.8	76.4	63.9	47.6	37.7	26.9	15.6	11.3
1.75V	131	102	82.9	72.8	61.1	46.2	37.0	26.3	15.5	11.2
1.80V	115	92.5	77.2	67.7	58.0	44.0	35.5	25.5	15.2	11.1
1.85V	98.6	82.9	70.8	60.8	53.3	40.7	32.6	23.8	14.5	10.6

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

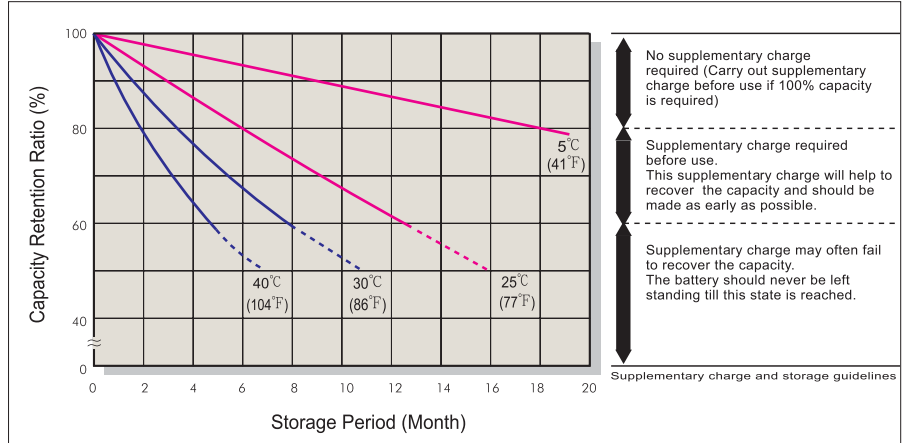
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	1,701	1,282	1,041	868	753	544	429	309	183	133
1.67V	1,570	1,193	989	850	734	540	428	307	182	132
1.70V	1,509	1,155	962	838	726	534	426	305	181	131
1.75V	1,398	1,087	913	802	704	520	416	300	179	130
1.80V	1,282	1,011	862	756	665	501	402	295	177	129
1.85V	1,166	926	797	687	608	461	375	277	168	124

● 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%)

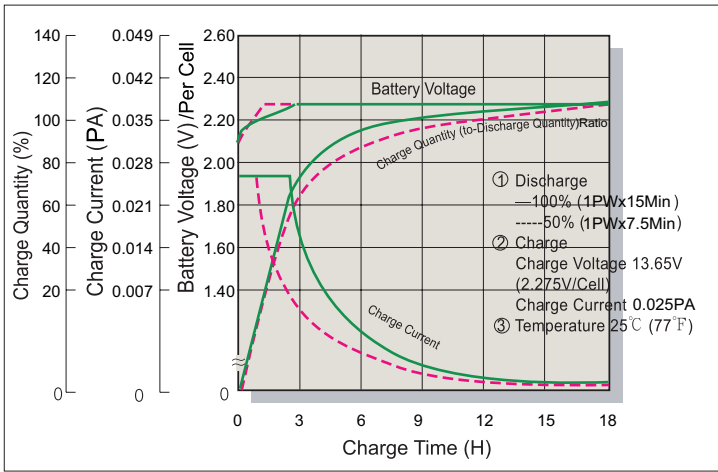
Trickle (or Float) Service Life



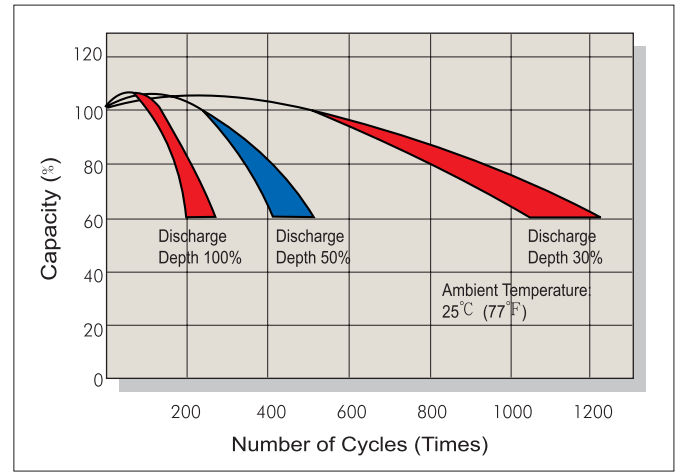
Capacity Retention Characteristic



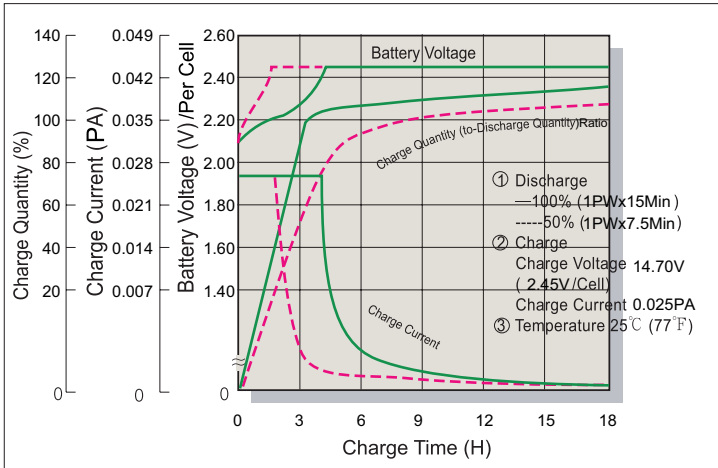
Battery Voltage and Charge Time for Standby Use



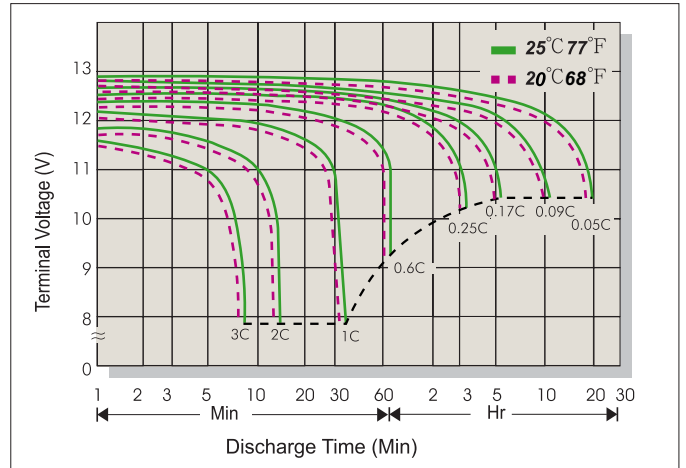
Cycle Service Life



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

Sales Office URL: WWW.CSB-BATTERY.COM

CSB BATTERY CO., LTD.
TAIWAN OFFICE
 Tel: +886-2-2555-5600
 Fax: +886-2-2555-3300
 E-mail: service@csb-battery.com.tw

CSB BATTERY TECHNOLOGIES (BEIJING) CO., LTD.
BEIJING OFFICE
 Tel: +86-10-59621300/59621301/59621302/59621303
 Fax: +86-10-59621304
 mail: chinasls@csb-battery.com

CSB BATTERY TECHNOLOGIES, INC
USA OFFICE
 Tel: +1-817-244-7777/1-8003 CSBUSA(272872)
 Fax: +1-817-244-4445
 E-mail: csb@csb-battery.com

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.
SHANGHAI OFFICE
 Tel: +86-21-5046-1622, 5046-0833
 Fax: +86-21-5064-3314
 E-mail: chinasls@csb-battery.com

CSB BATTERY OF NETHERLANDS B.V
NETHERLANDS OFFICE
 Tel: +31(0) 180 418 140
 Fax: +31(0) 180 418 327
 E-mail: eurosales@csb-battery.com

CSB BATTERY LOGISTIC (SHANGHAI) CO., LTD.
SHENZHEN OFFICE
 Tel: +86-755-8831-6488/6396/16356
 Fax: +86-755-8831-6548
 mail: she@csb-battery.com.cn