

HR 1234W F2

12V 34W

HR 1234W F2 is specially designed for high efficient discharge application. Its characteristics are small volume, light weight and high discharge efficiency. It can be used for more than 260 cycles at 100% discharge in cycle service, or three to five years in standby service.



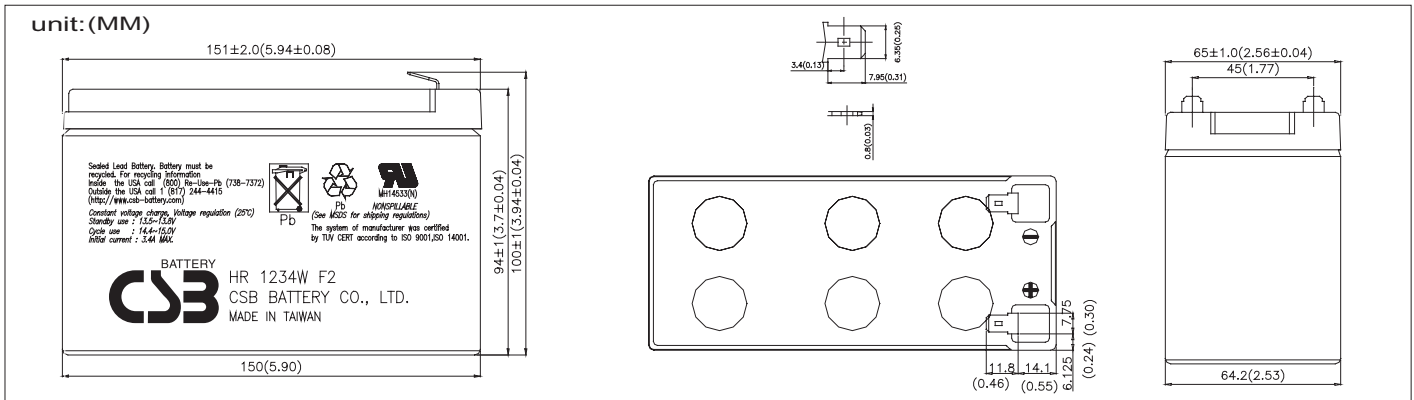
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	34W @ 15minute-rate to 1.67V per cell @25 °C (77°F)
Weight	Approx. 2.62kg(5.8 lbs)
Maximum Discharge Current	130A(5sec)
Internal Resistance	Approx. 20mΩ
Operating Temperature Range	Discharge: -20°C~50°C (-4°F~122°F) Charge: 0°C~40°C (32°F~104°F) Storage: -20°C~40°C (-4°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	3.4A
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	Faston Tab 250
Container Material	-ABS (UL94-HB)*Flammability resistance of UL94-V0 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)

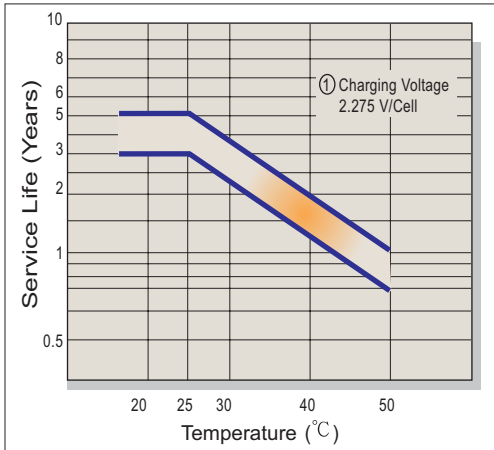
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	60.17	44.92	35.00	29.92	25.75	19.00	15.00	10.83	5.83	4.67
1.67V	56.08	42.00	32.67	28.35	24.35	18.18	14.13	10.42	5.61	4.48
1.70V	54.33	40.75	31.67	27.67	23.75	17.83	13.75	10.25	5.52	4.40
1.75V	51.50	38.63	30.63	26.63	22.59	17.21	13.54	10.09	5.50	4.35
1.80V	48.67	36.50	29.58	25.58	21.42	16.58	13.33	9.92	5.47	4.30
1.85V	45.84	34.38	28.54	24.54	20.26	15.96	13.12	9.76	5.45	4.25

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

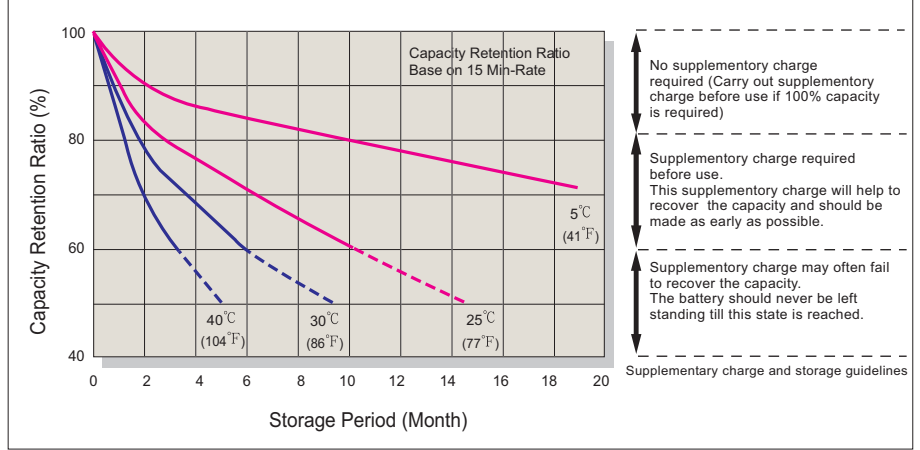
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	722.00	539.00	420.00	359.00	309.00	228.00	180.00	130.00	70.00	56.00
1.67V	673.00	504.00	392.00	340.10	292.20	218.20	169.50	125.10	67.34	53.76
1.70V	652.00	489.00	380.00	332.00	285.00	214.00	165.00	123.00	66.20	52.80
1.75V	618.00	463.50	367.50	319.50	271.00	206.50	162.50	121.00	65.90	52.20
1.80V	584.00	438.00	355.00	307.00	257.00	199.00	160.00	119.00	65.60	51.60
1.85V	550.00	412.50	342.50	294.50	243.00	191.50	157.50	117.00	65.30	51.00

● All mentioned values are average values.

Trickle (or Float) Service Life



Capacity Retention Characteristic



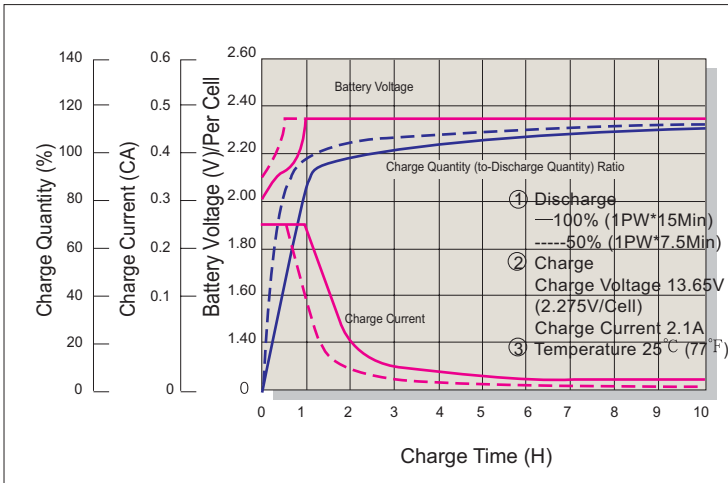
No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.

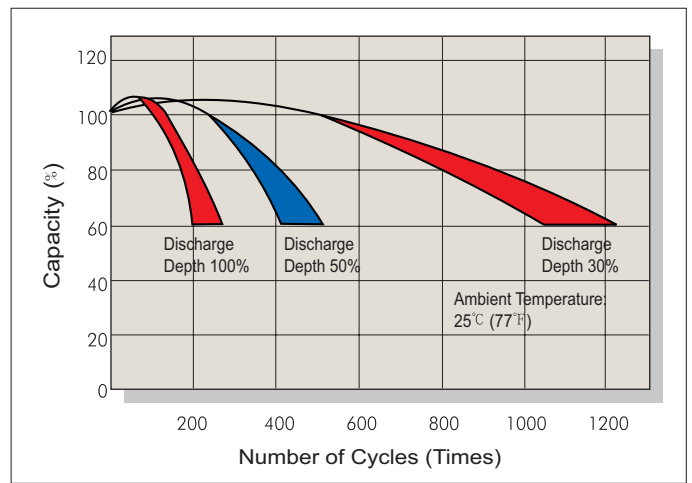
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached.

Supplementary charge and storage guidelines

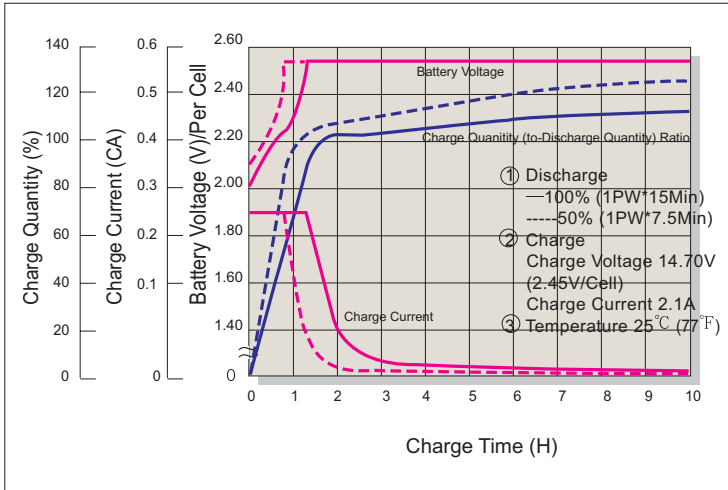
Battery Voltage and Charge Time for Standby Use



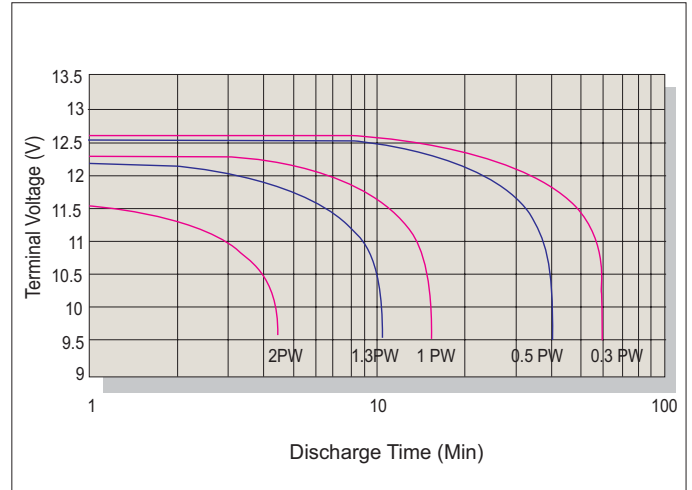
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



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



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	1.55	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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