

HRL 1234W F2FR

12V 34W

HRL 1234W F2FR is specially designed for high efficient discharge and long life application. It's 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 five to eight years in standby service.



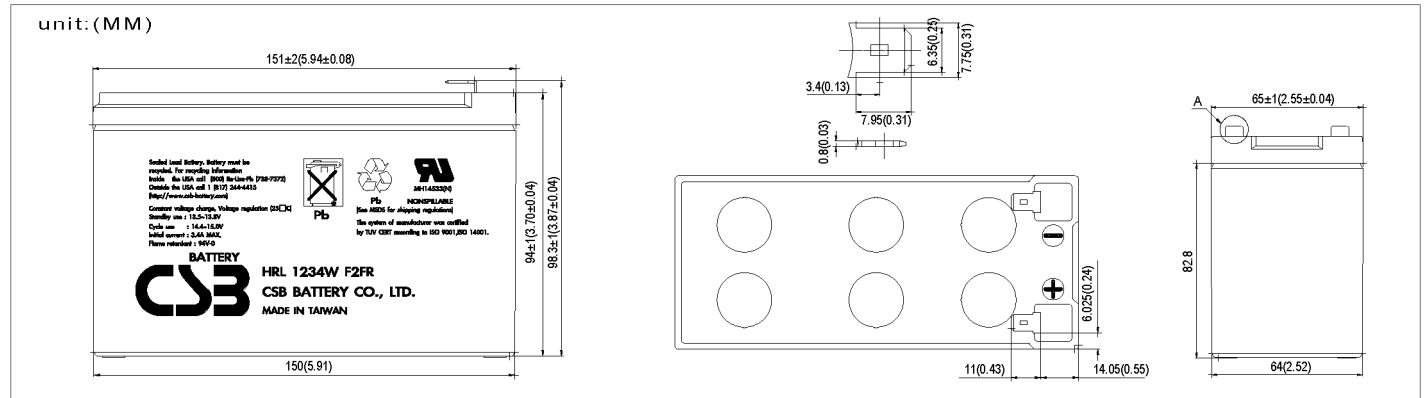
Specification

Cells per unit	6
Voltage per unit	12
Capacity	34W @ 15minute-rate to 1.67V per cell @25°C(77°F)
Weight	Approx. 2.7kg(5.95 lbs)
Maximum Discharge Current	130A(5sec)
Internal Resistance Approx.	Approx. 17mΩ
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-VO Flame Retardant Case).



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)

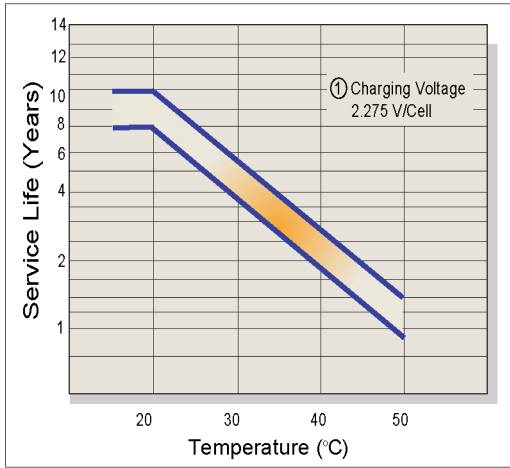
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	60.4	47.4	36.2	30.9	26.6	18.7	14.4	11.3	5.84	4.66
1.67V	57.3	44.7	33.9	29.3	25.2	18.6	14.3	11.1	5.80	4.63
1.70V	55.9	43.5	32.9	28.6	24.6	18.5	14.2	11.0	5.78	4.62
1.75V	52.4	40.7	30.9	27.0	22.8	18.3	14.1	10.9	5.74	4.57
1.80V	48.9	37.9	28.9	25.4	21.0	18.1	13.9	10.8	5.69	4.52
1.85V	45.4	35.1	26.9	23.8	19.2	17.9	13.7	10.7	5.65	4.47

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

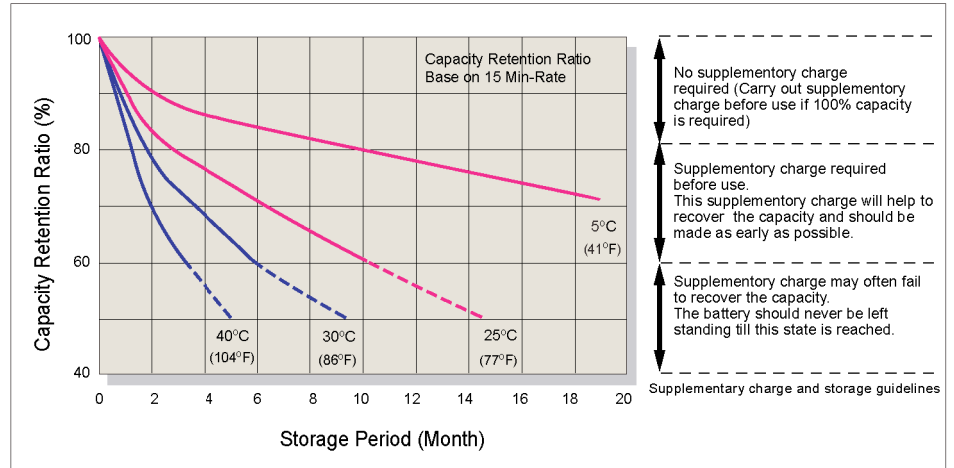
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	654	520	405	350	300	220	168	132	69.2	55.4
1.67V	623	492	381	333	286	217	165	131	68.9	55.1
1.70V	610	480	370	325	280	215	164	130	68.7	55.0
1.75V	583	455	350	309	265	208	162	129	68.3	54.6
1.80V	555	430	330	293	250	200	160	127	67.8	54.1
1.85V	528	405	310	277	235	193	158	126	67.4	53.7

- All mentioned values are average values.
- Low rate discharge mode (over 90 mins.) is not recommended.

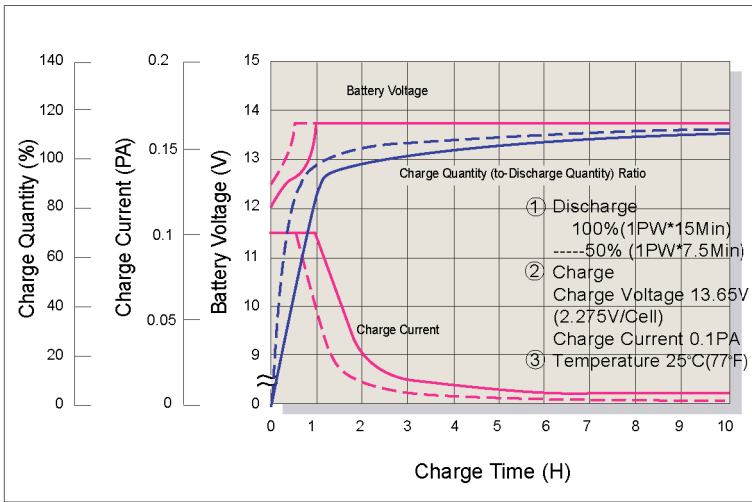
Trickle (or Float) Service Life



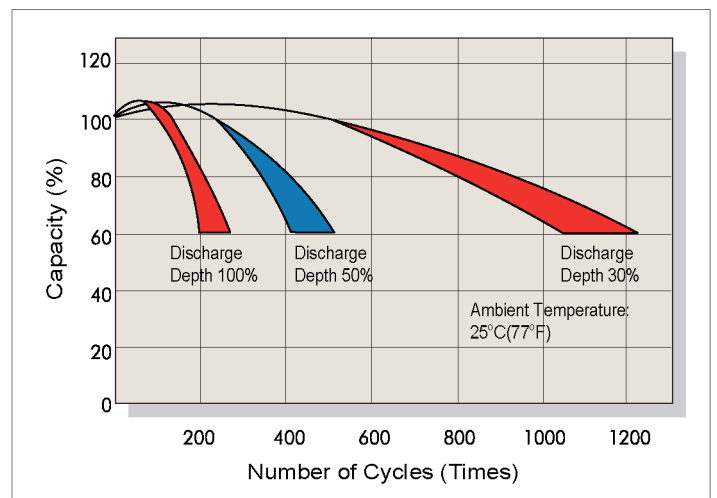
Capacity Retention Characteristic



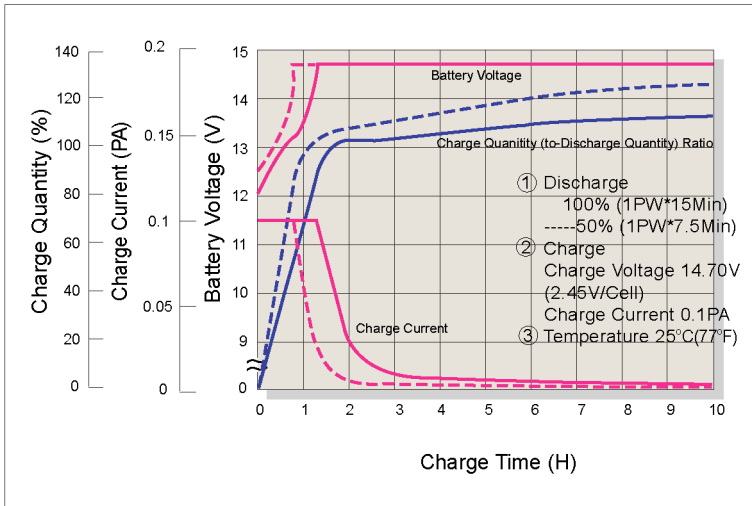
Battery Voltage and Charge Time for Standby Use



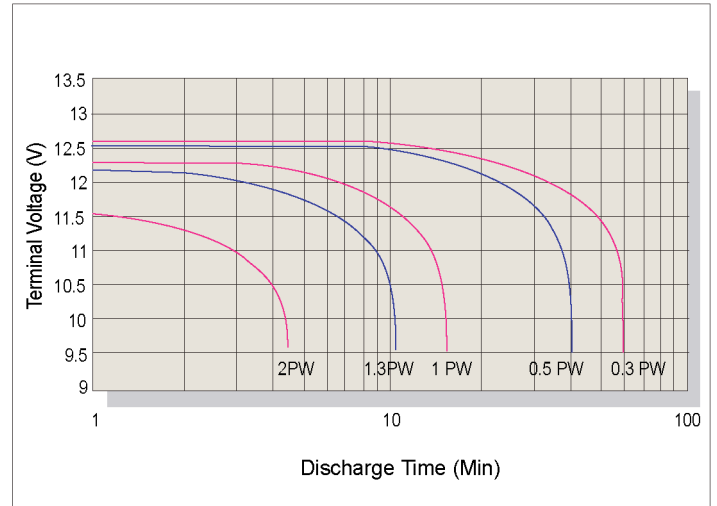
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



Terminal Voltage (V) and Discharge Time (25°C77°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	0.1PA
Standby	25°C(77°F)	2.275	2.25~2.30	