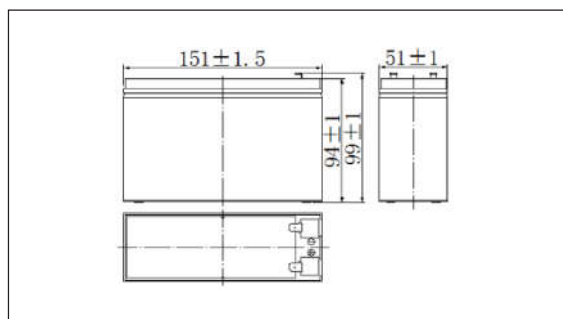


HR1224W-FR (12V24 Watts/cell)

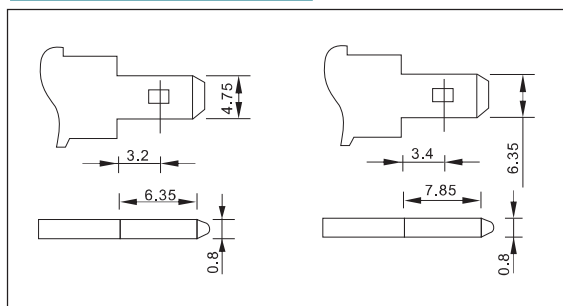
Specifications

Nominal Voltage		12V
Number of cell		6 cells
Rated capacity(15min.rat)		24 Watts/cell
Dimensions	Length	151±1.5mm(5.94inch)
	Width	51±1mm(2.01inch)
	Height	94±1mm(3.70inch)
	Total Height	99±1mm(3.90inch)
Approx. Weight		1.94kg(4.28lbs)±4%

Outer dimensions (mm)



Terminal Type (mm)



Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Leaddioxide	Lead	ABS	ABS	AGM	Sulfuric acid	Rubber	Copper

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

F.V/Time	5min	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h
1.60V/cell	26.0	16.0	12.6	9.95	6.74	4.99	4.08	2.20	1.57	1.26	1.08
1.67V/cell	24.8	15.3	12.1	9.55	6.52	4.83	3.98	2.19	1.55	1.25	1.07
1.70V/cell	24.2	14.9	11.8	9.35	6.40	4.74	3.92	2.17	1.55	1.24	1.07
1.75V/cell	23.1	14.2	11.4	9.03	6.25	4.63	3.84	2.14	1.54	1.24	1.06
1.80V/cell	21.8	13.4	10.8	8.55	6.02	4.46	3.72	2.09	1.49	1.20	1.03

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

F.V/Time	5min	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h
1.60V/cell	49.9	31.1	24.9	19.7	13.3	9.88	8.08	4.39	3.15	2.53	2.18
1.67V/cell	47.6	29.7	24.0	18.9	12.9	9.56	7.88	4.35	3.12	2.51	2.16
1.70V/cell	46.4	28.9	23.4	18.5	12.7	9.39	7.76	4.32	3.11	2.50	2.15
1.75V/cell	44.4	27.6	22.6	17.9	12.4	9.16	7.61	4.26	3.09	2.48	2.13
1.80V/cell	41.9	26.1	21.4	16.9	11.9	8.82	7.37	4.15	2.99	2.41	2.07

Note: The above characteristics data can be obtained within three charge or discharge cycles.

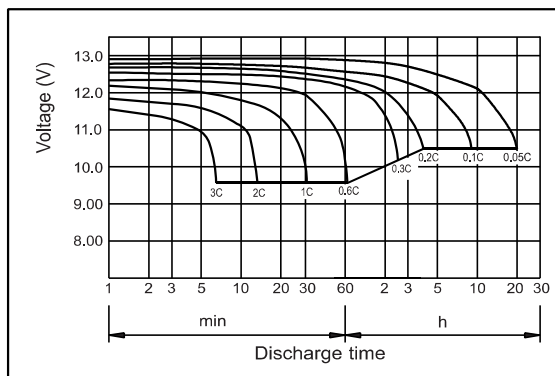


Characteristics

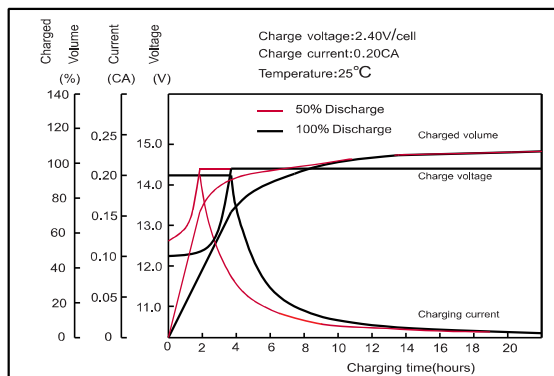
Capacity(20HR,25℃)		6Ah
Capacity(15min.rate,25℃)		24 Watts/cell
Terminal type		T2/T1
Internal resistance (Fully charged,25℃)		Approx.19m Ω
Capacity affected by temperature (10HR)	40℃	102%
	25℃	100%
	0℃	85%
	-15℃	65%
Self-discharge (25℃)	3month	Remaining Capacity:91%
	6month	Remaining Capacity:82%
	12month	Remaining Capacity:65%
Nominal operating temperature		25℃ ±3℃(77°F ±5°F)
Operating temperature range	Discharge	-15℃~50℃(5°F~122°F)
	Charge	-10℃~50℃(14°F~122°F)
	Storage	-20℃~50℃(-4°F~122°F)
Float charging voltage(25℃)		13.50 to 13.80V Temperature compensation -18mV/℃
Cyclic charging voltage(25℃)		14.50 to 15.00V Temperature compensation -30mV/℃
Maximum charging current		1.8A
Terminal material		Copper
Maximum discharge current		90A(5 sec.)
Designed floating life(20℃)		5years

HR1224W-FR (12V24 Watts/cell)

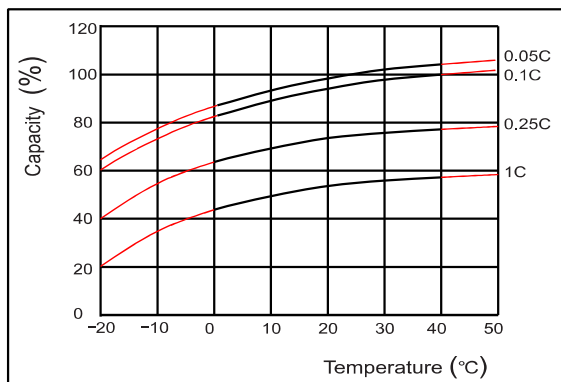
● Discharge characteristics(25°C)



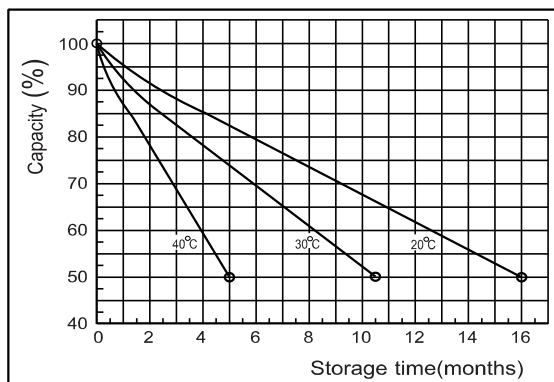
● Charging characteristics (25°C)



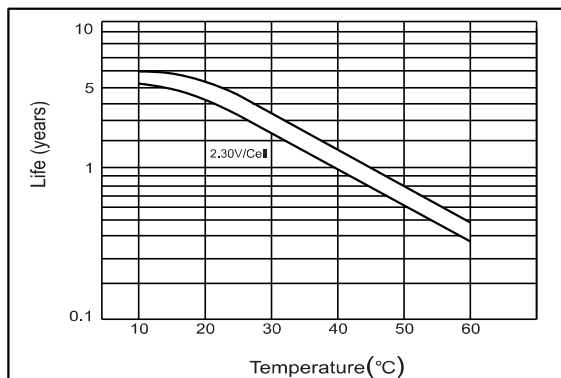
● Effect of Temperature on Capacity



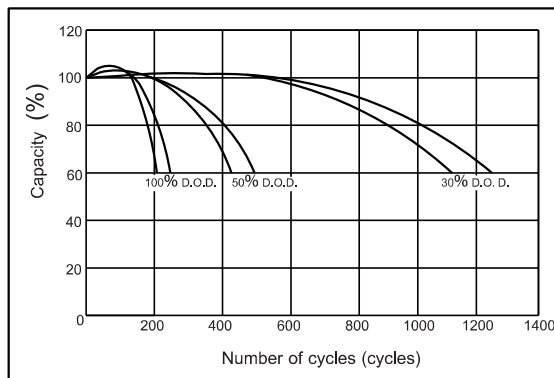
● Self-discharge characteristics



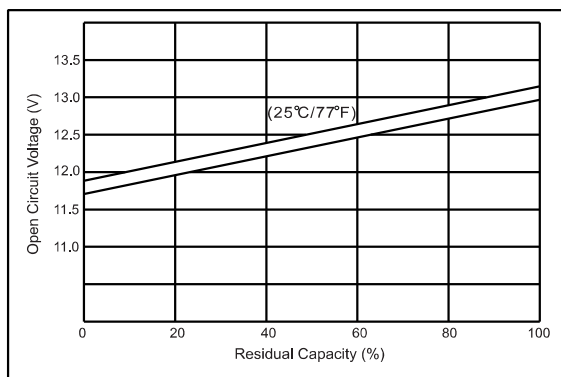
● Floating Life on Temperature



● Cycle service Life on D.O.D (25°C)



● The relationship for OCV and Capacity (25°C)



● The relationship for Charging voltage and Temperature

