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HR SERIES-HIGH RATE **BATTERIES**

HR 1251W



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HR 1251W



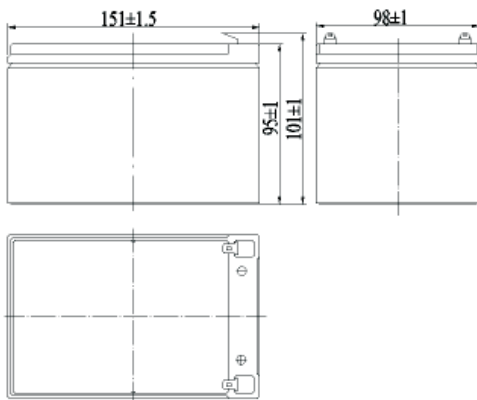
SPECIFICATIONS

Nominal Voltage	12V	
Number of Cell	6 cells	
Rated Capacity (15min. rat)	51 Watts/cell	
Dimensions	Length	151±1.5mm(5.94inch)
	Width	98±1mm(3.86inch)
	Height	95±1mm(3.74inch)
	Total Height	101±1mm(3.98inch)
Approx. Weight	4kg (8.82lbs)±4%	

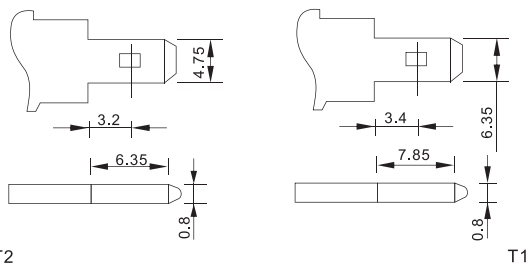
CHARACTERISTICS

Capacity (20HR, 25°C)	14Ah	
Capacity (15min.rate, 25°C)	51 Watts/cell	
Terminal Type	T2/T1	
Internal Resistance (Fully Charged, 25°C)	Approx. 11mΩ	
Capacity Affected by Temperature (10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-Discharge (25°C)	3 months	Remaining Capacity: 91%
	6 months	Remaining Capacity: 82%
	12months	Remaining Capacity: 65%
Nominal Operating Temperature	25±3°C (77±5°F)	
Operating Temperature Range	Discharge	-15°C~50°C(5°F~122°F)
	Charge	-10°C~50°C(14°F~122°F)
	Storage	-20°C~50°C(4°F~122°F)
Float Charging Voltage (25°C)	13.50 to 13.80V Temperature Compensation: -18mV/°C	
Cyclic Charging Voltage (25°C)	14.50 to 15.00V Temperature Compensation: -30mV/°C	
Maximum Charging Current	3.6A	
Terminal Material	Copper	
Maximum Discharge Current	180A(5 sec)	
Design Floating Life(20°C)	5 Years	

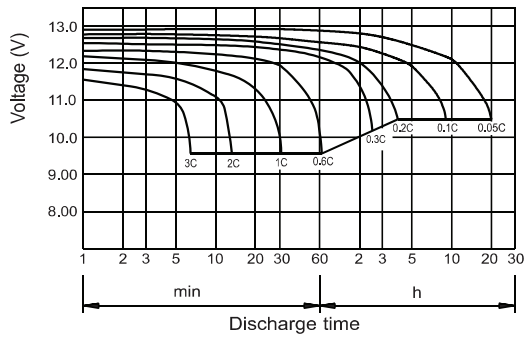
Outer Dimensions (mm)



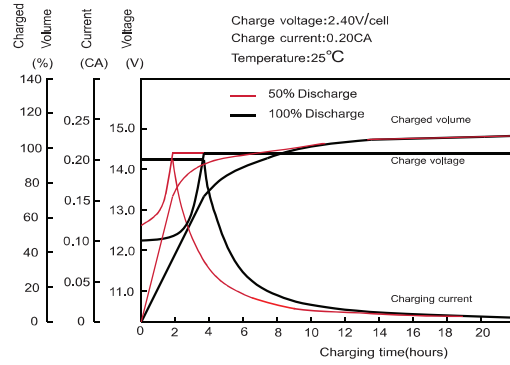
Terminal Type (mm)



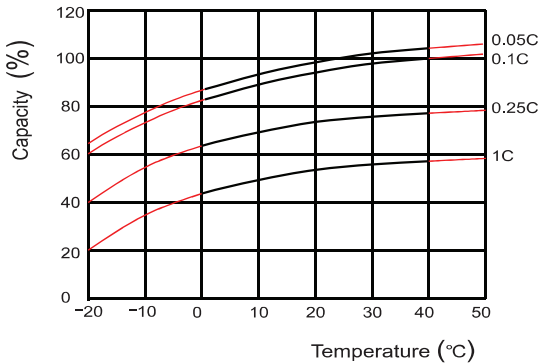
Discharge Characteristics



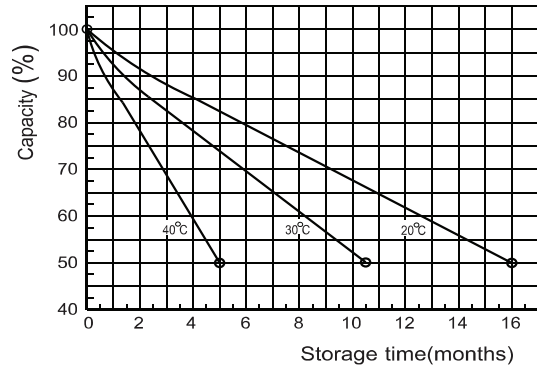
Charging Characteristics (25°C)



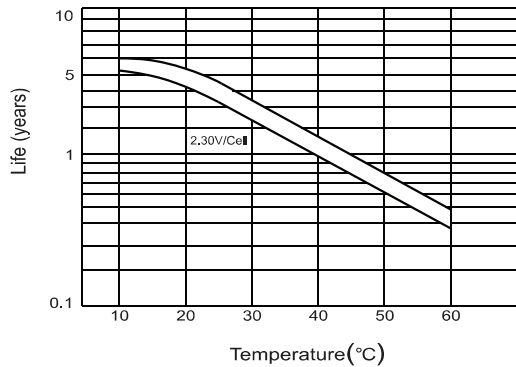
Effect of Temp on Capacity



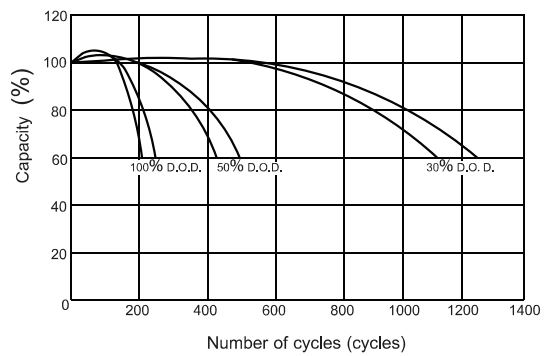
Self-Discharge Characteristics



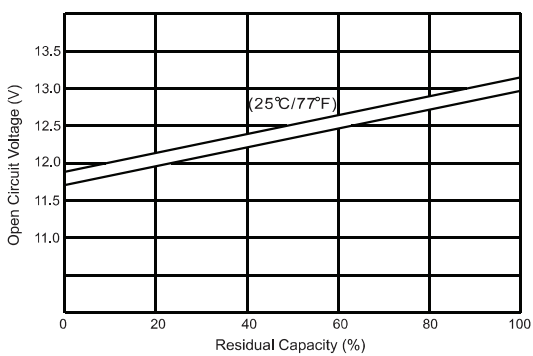
Floating Life on Temperature



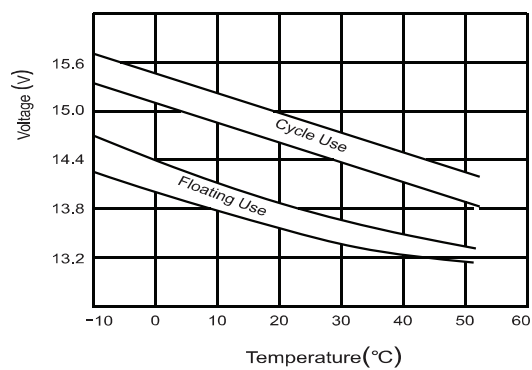
Cycle Service Life on D.O.D (25°C)



Relationship for OCV and Capacity (25°C)



Relationship for Charging Voltage and Temp



Construction

Component	Positive Plate	Negative Plate	Container	Cover	Separator	Electrolyte	Safety Valve	Terminal
Raw material	Lead Dioxide	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	55.3	34.0	26.7	21.2	14.3	10.6	8.68	4.78	3.39	2.73	2.35
1.67V/cell	52.8	32.5	25.8	20.3	13.9	10.3	8.46	4.73	3.36	2.71	2.33
1.70V/cell	51.4	31.7	25.1	19.9	13.6	10.1	8.33	4.71	3.35	2.70	2.32
1.75V/cell	49.2	30.3	24.3	19.2	13.3	9.84	8.17	4.64	3.33	2.68	2.30
1.80V/cell	46.4	28.6	23.0	18.2	12.8	9.48	7.92	4.52	3.23	2.60	2.33

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	106	66.0	52.9	41.9	28.4	21.0	17.2	9.51	6.82	5.49	4.72
1.67V/cell	101	63.1	51.1	40.2	27.5	20.3	16.8	9.42	6.76	5.44	4.68
1.70V/cell	98.7	61.4	49.8	39.4	27.0	20.0	16.5	9.36	6.74	5.42	4.66
1.75V/cell	94.4	58.8	48.1	38.0	26.3	19.5	16.2	9.22	6.69	5.38	4.63
1.80V/cell	89.1	55.5	45.5	36.0	25.3	18.8	15.7	8.99	6.49	5.22	4.49





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