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HR SERIES-HIGH RATE **BATTERIES**

HR 12540W

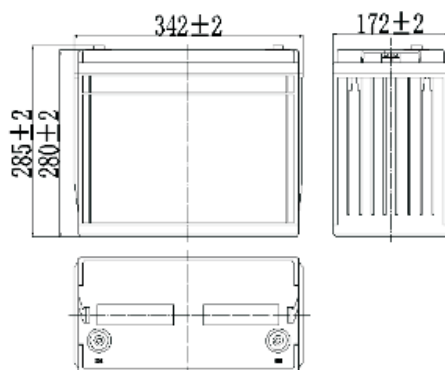


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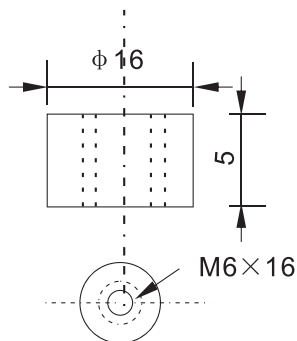
HR 12540W



Outer Dimensions (mm)



Terminal Type (mm)



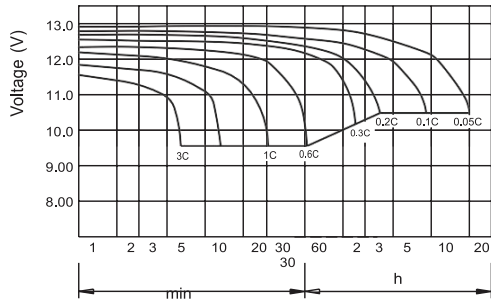
SPECIFICATIONS

Nominal Voltage	12V	
Number of Cell	6 cells	
Rated Capacity (15min. rat)	540 Watts/cell	
Dimensions	Length	342±2mm(13.46inch)
	Width	172±2mm(6.77inch)
	Height	280±2mm(11.02inch)
	Total Height	285±2mm(11.2inch)
Approx. Weight	46.5kg (102.3lbs)±3%	

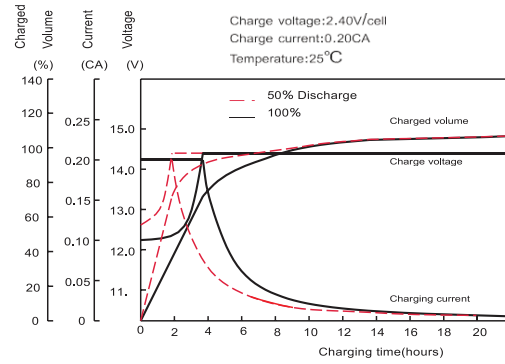
CHARACTERISTICS

Capacity (20HR, 25°C)	145Ah	
Capacity (15min.rate, 25°C)	540 Watts/cell	
Terminal Type	T16	
Internal Resistance (Fully Charged, 25°C)	Approx. 3.2mΩ	
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	43.5A	
Terminal Material	Copper	
Maximum Discharge Current	2015A(5 sec)	
Design Floating Life(20°C)	10 Years	

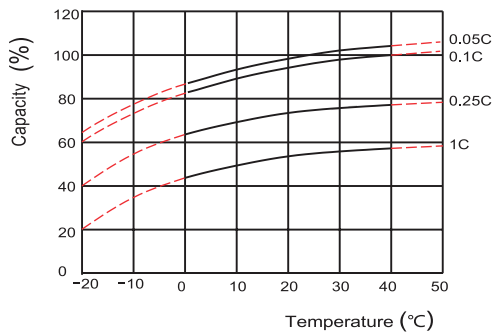
Discharge Characteristics



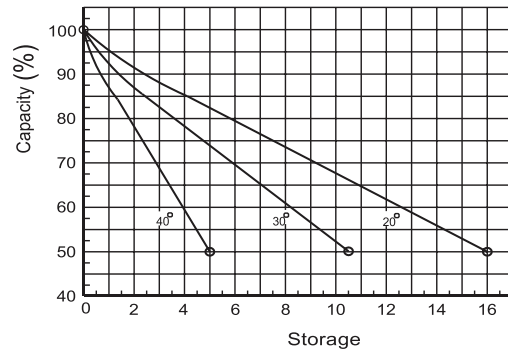
Charging Characteristics (25°C)



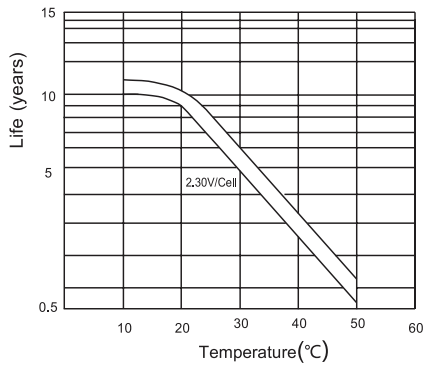
Effect of Temp on Capacity



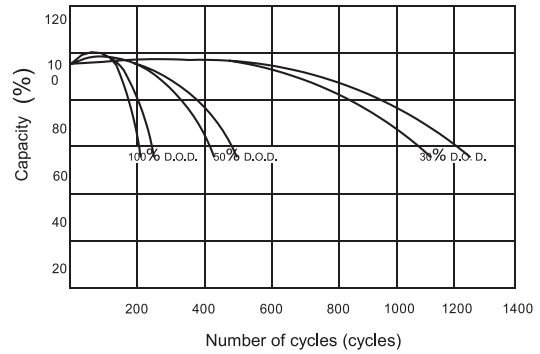
Self-Discharge Characteristics



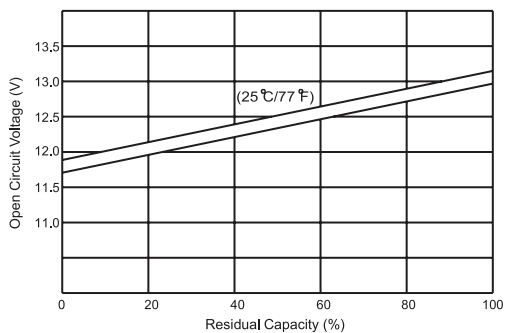
Floating Life on Temperature



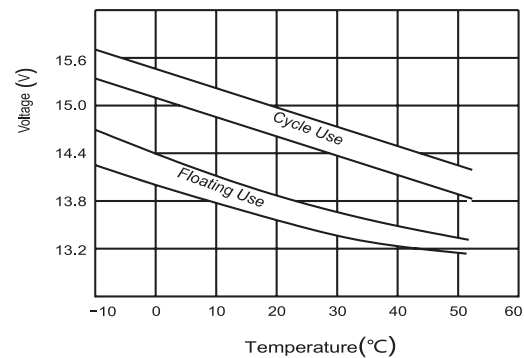
Cycle Service Life on D.O.D (25°C)



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	30min	1h	2h	3h	5h	8h	10h	20h
1.60V/cell	533.19	387.66	319.62	199.5	114.98	64.79	45.36	29.4	20.06	16.7	8.78
1.67V/cell	490.25	358.37	302.93	189.84	110.88	63.11	44.52	28.67	19.64	16.28	8.61
1.70V/cell	447.2	325.19	278.25	181.97	107.1	61.11	43.26	28.04	19.22	16.07	8.46
1.75V/cell	400.37	295.89	253.26	169.89	102.17	59.12	42.11	27.41	18.8	15.75	8.33
1.80V/cell	343.77	264.6	228.48	158.24	96.71	56.7	40.74	26.78	18.48	15.44	8.14

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

F.V/Time	5min	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V/cell	954.35	700.88	586.53	372.12	217.88	123.59	87.05	57.02	39.38	32.87	17.43
1.67V/cell	894.6	661.61	565.95	361.62	213.99	122.64	86.94	56.6	39.06	32.76	17.43
1.70V/cell	824.67	606.8	524.16	348.71	207.8	119.28	84.84	55.65	38.54	32.45	17.22
1.75V/cell	745.61	557.24	481.85	327.81	199.71	116.24	83.16	54.6	37.91	31.92	17.01
1.80V/cell	646.17	504.84	438.69	307.65	190.37	112.14	80.96	53.66	37.38	31.5	16.7





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