

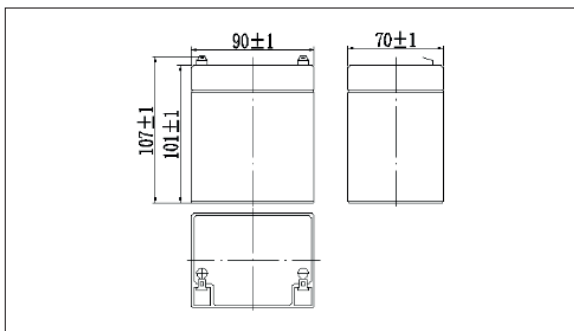
## ES5-12 12V5AH

### Specifications

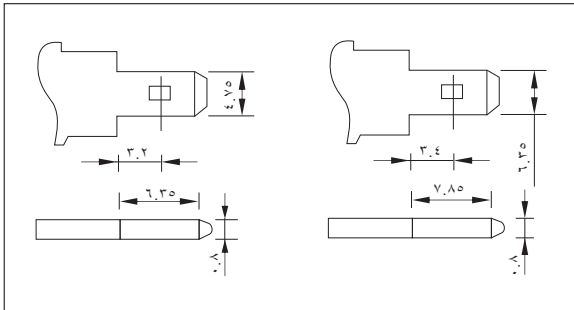
Nominal Voltage	12V	
Rated capacity (20 hour rate)	5Ah	
Dimensions	Length	90±1mm(3.54inch)
	Width	70±1mm(2.76inch)
	Height	101±1mm(3.98inch)
	Total Height	107±1mm(4.21inch)
Approx. Weight	1.58kg(3.48lbs) ±4%	



### Outer dimensions (mm)



### Terminal Type (mm)



### 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(20°C, 25°F)

F.V/Time	0 min	10 min	15 min	20 min	30 min	1h	2h	4h	5h	10h	20h
9.70V	19.1	12.1	9.40	5.33	3.28	1.79	1.24	1.03	0.87	0.47	0.25
9.90V	18.0	11.7	9.22	5.22	3.23	1.78	1.23	1.02	0.87	0.47	0.25
10.2V	17.8	11.3	8.88	5.07	3.14	1.77	1.22	1.01	0.86	0.47	0.25
10.5V	17.0	10.8	8.08	4.94	3.08	1.74	1.22	1.01	0.86	0.47	0.25
10.8V	16.0	10.2	8.13	4.76	2.99	1.79	1.18	0.97	0.83	0.46	0.25

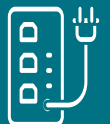
### Constant Power Discharge Characteristics Unit:W(20°C, 25°F)

F.V/Time	0 min	10 min	15 min	20 min	30 min	1h	2h	4h	5h	10h	20h
9.70V	213	136	108	61.0	37.9	21.0	14.7	12.2	10.4	5.68	3.00
9.90V	207	132	105	59.8	37.4	20.8	14.6	12.1	10.3	5.67	3.03
10.2V	198	127	101	58.0	36.4	20.7	14.5	12.0	10.2	5.63	3.02
10.5V	190	121	97.8	56.7	35.7	20.3	14.4	12.0	10.2	5.60	3.00
10.8V	179	110	92.7	54.0	34.7	19.8	14.0	11.7	9.90	5.49	2.94

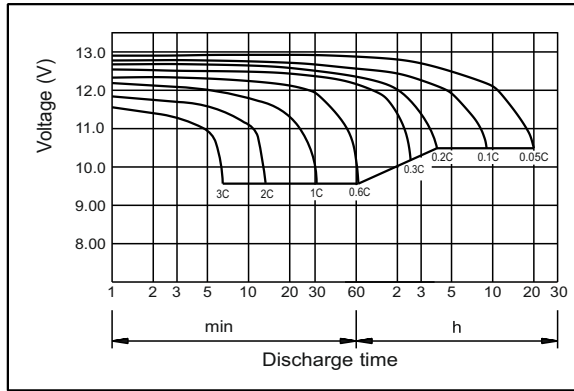
Note: The above characteristics data can be obtained within three charge or discharge cycles.

### Characteristics

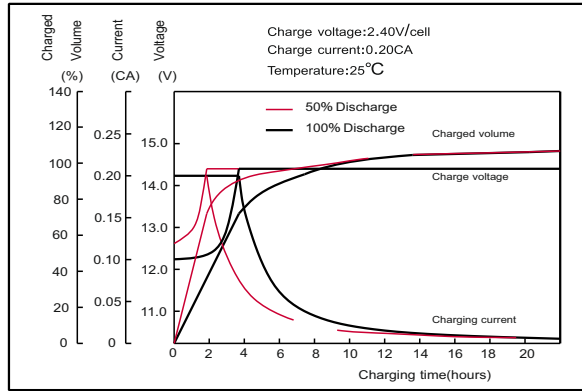
Capacity (25°C)	20HR(10.5V)	5Ah
	10HR(10.5V)	4.7Ah
	1HR(9.60V)	3Ah
Terminal type		T1/T2
Internal resistance (Fully charged, 25°C)		Approx. 27m Ω
Capacity affected by temperature (20HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3month	Remaining Capacity: %91
	6month	Remaining Capacity: %82
	12month	Remaining Capacity: %65
Nominal operating temperature		25°C ±3°C(77°F ±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: 18-mV/°C	
Cyclic charging voltage(25°C)	14.50 to 15.00V Temperature compensation: 30-mV/°C	
Maximum charging current	1.5A	
Maximum discharge current	75A(5 sec.)	
Designed floating life(20°C)	5 years	



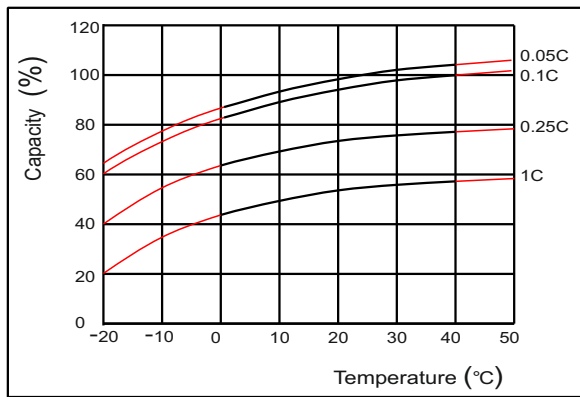
### ● Discharge characteristics(25°C)



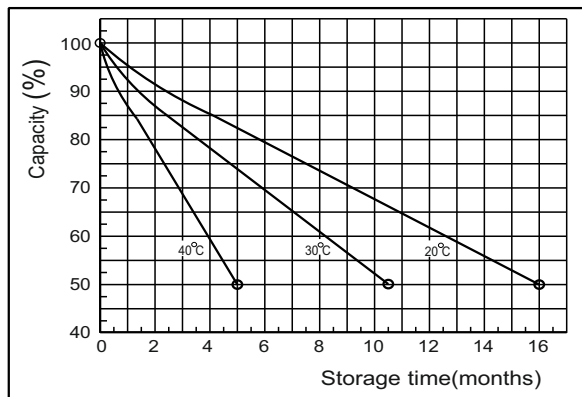
### ● Charging characteristics (25°C)



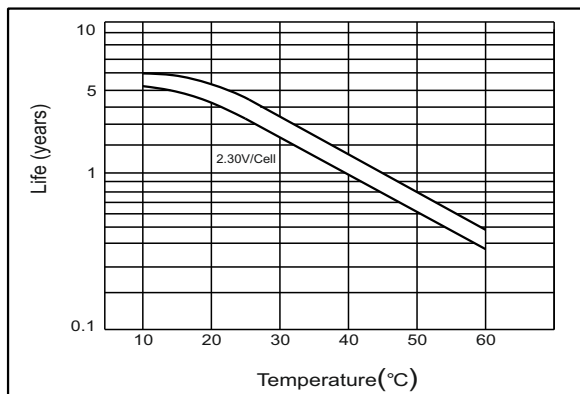
### ● Effect of temperature on capacity



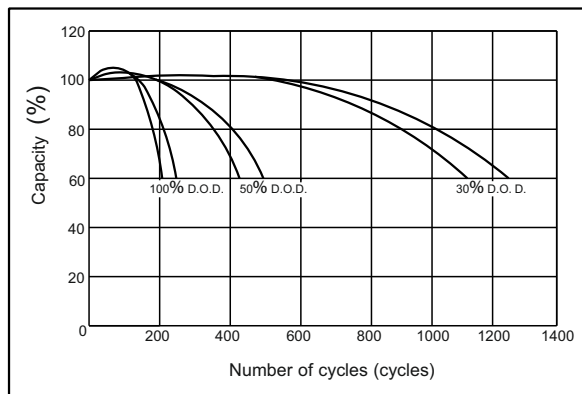
### ● Self-discharge characteristics



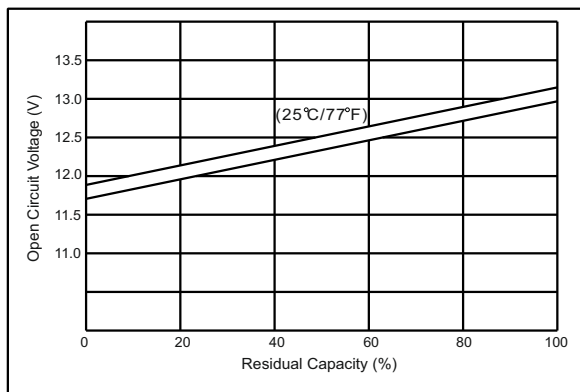
### ● Floating life on temperature



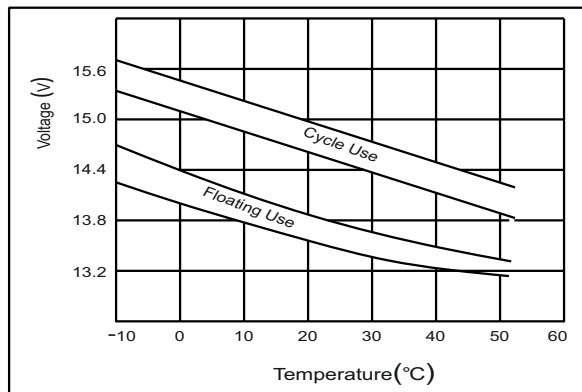
### ● Cycle life on D.O.D(25°C)



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



### ● The relationship for Charging voltage and Temperature



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