

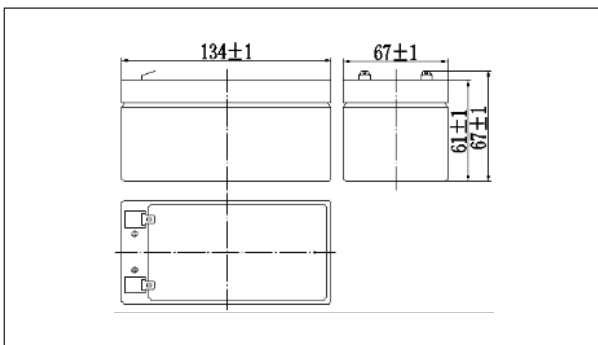
# VMP

## VP12-3.4 12V3.4Ah

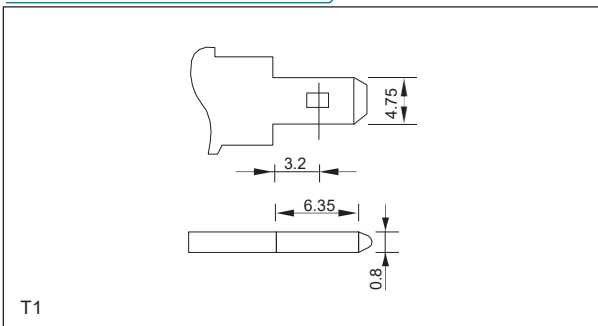
### ● Specification

Nominal Voltage		12V
Rated capacity (20 hour rate)		3.4Ah
Dimensions	Length	137mm
	Width	67mm
	Height	60mm
	Total Height	67mm
Approx. Weight		1.20kg

### ● Outer dimension (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 Characteristic Unit:A(25°C)

F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	12.2	7.74	6.05	3.41	2.10	1.15	0.79	0.66	0.56	0.30	0.16
9.90V	11.9	7.51	5.90	3.34	2.06	1.14	0.79	0.65	0.55	0.30	0.16
10.2V	11.4	7.20	5.69	3.24	2.01	1.13	0.78	0.65	0.55	0.30	0.16
10.5V	10.9	6.89	5.49	3.16	1.97	1.11	0.78	0.64	0.55	0.30	0.16
10.8V	10.3	6.50	5.20	3.04	1.91	1.08	0.75	0.62	0.53	0.29	0.16

### ● Constant Power Discharge Characteristic Unit:W(25°C)

F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	136	87.4	68.9	39.1	24.3	13.4	9.42	7.81	6.66	3.64	1.95
9.90V	132	84.7	67.3	38.3	23.9	13.3	9.37	7.77	6.63	3.62	1.94
10.2V	127	81.2	64.8	37.1	23.3	13.2	9.30	7.71	6.58	3.60	1.93
10.5V	121	77.7	62.6	36.2	22.8	13.0	9.24	7.66	6.53	3.58	1.92
10.8V	115	73.4	59.3	34.9	22.1	12.7	8.96	7.43	6.34	3.51	1.88

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

## VRLA BATTERY

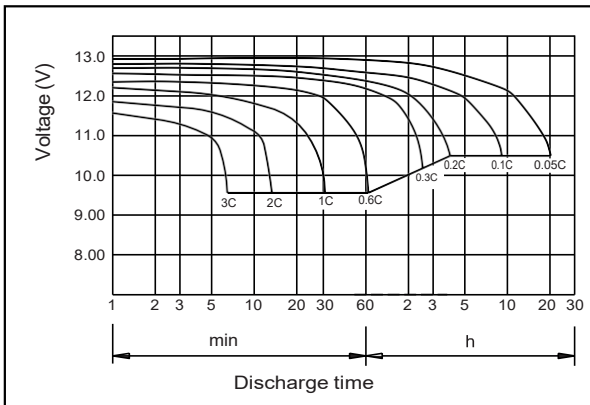


### ● Characteristic

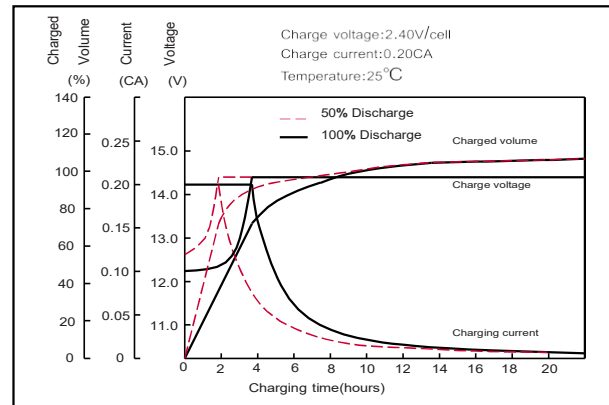
Capacity (25°C)	20HR(10.5V)	3.4Ah
	10HR(10.5V)	3.0Ah
	1HR(9.60V)	2.0Ah
Terminal type		T1 (L)
Internal resistance (Fully charged,25°C)		Approx.50m Ω
Capacity affected by temperature (20HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3month	Remaining Capacity:91%
	6month	Remaining Capacity:82%
	12month	Remaining Capacity:65%
Nominal operating temperature		25°C
Operating temperature range	Discharge	-15°C~50°C
	Charge	-10°C~50°C
	Storage	-20°C~50°C
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		0.96A
Maximum discharge current		48A(5 sec.)
Designed floating life(20°C)		5 years

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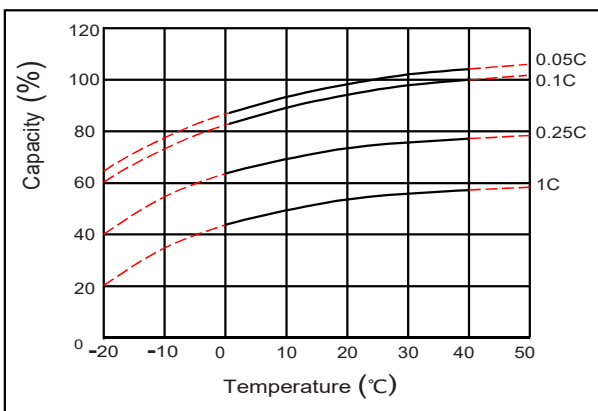
### ● Discharge characteristics(25°C)



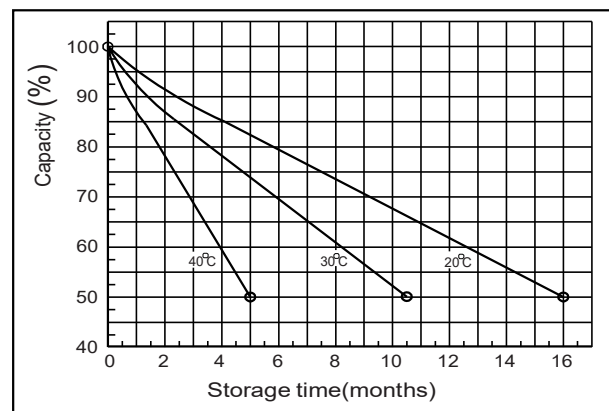
### ● Charging characteristics (25°C)



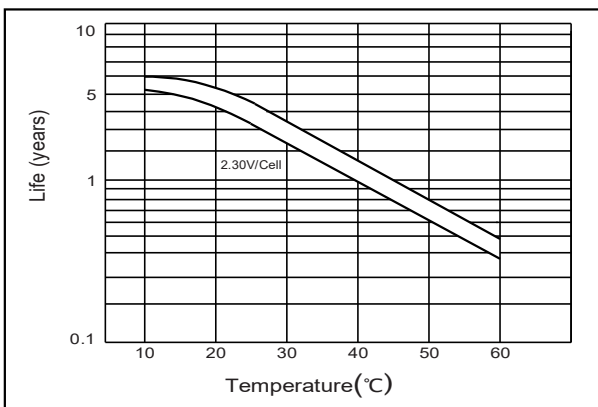
### ● Effect of temperature on capacity



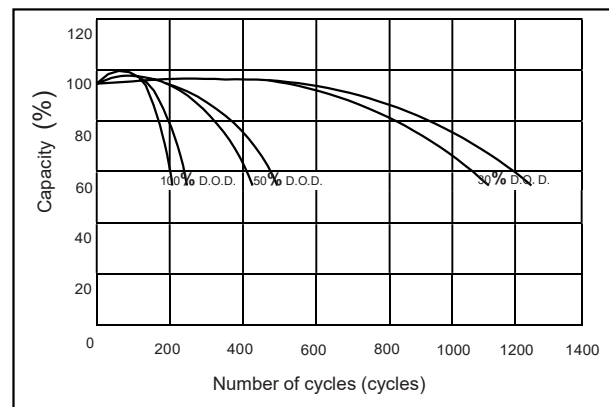
### ● Self-discharge characteristics



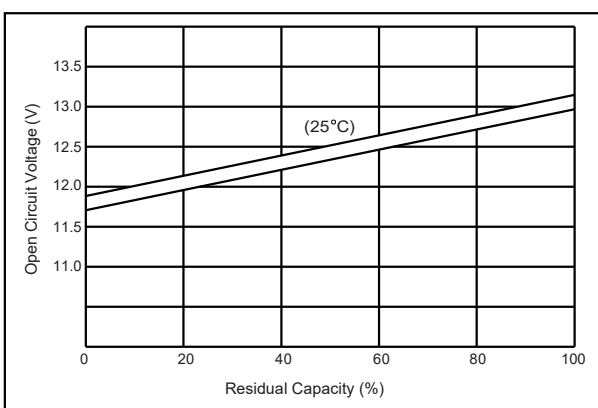
### ● Floating life on temperature



### ● Cycle life on D.O.D(25°C)



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



### ● The relationship for Charging voltage and Temperature

