

Valve Regulated Deep Cycle Battery

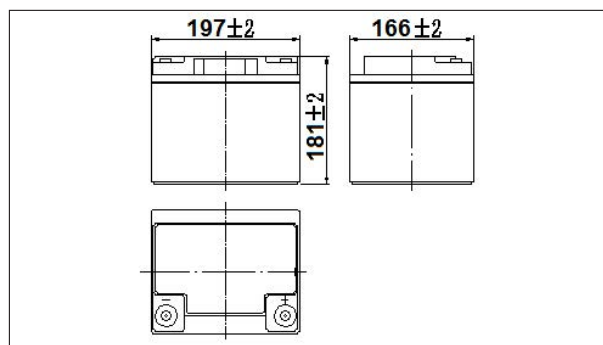
GPD50-12 12V 50AH

● Specifications

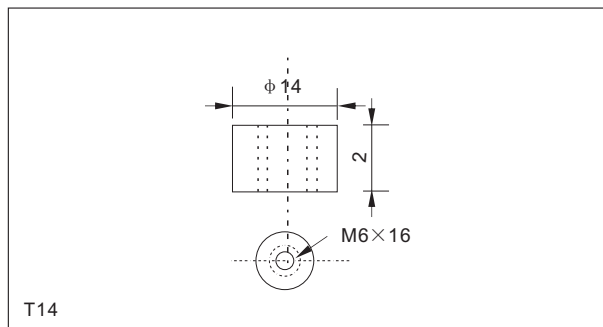
Nominal Voltage		12V
Rated capacity (10hour rate)		50Ah
Dimensions	Length	197±2mm(7.73inch)
	Width	166±2mm(6.54inch)
	Height	174±2mm(6.85inch)
	Total Height	181±2mm(7.13inch)
Approx. Weight		14.2kg(31.29lbs)±3%



● Outer dimensions (mm)



● Terminal Type (mm)



● Characteristics

Capacity (25°C)	10HR(10.8V)	50Ah
	3HR(10.8V)	36.3Ah
	1HR(10.5V)	29.2Ah
Terminal type		T14
Internal resistance (Fully charged, 25°C)		Approx. 7.5m Ω
Capacity affected by temperature (20HR)	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%
	12 months	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: -18mV/°C
Cyclic charging voltage(25°C)		14.50 to 15.00V Temperature compensation: -30mV/°C
Maximum charging current		15A
Maximum discharge current		500A(5 sec.)
Designed floating life(20°C)		10years

● 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)

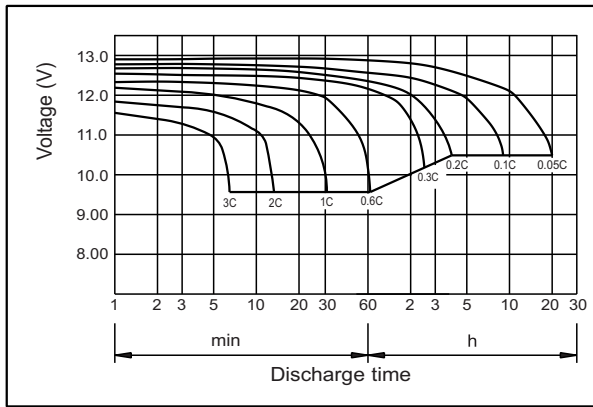
F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	105	82.5	50.0	31.0	18.3	12.8	10.5	8.93	6.12	5.09	2.67
9.90V	102	80.5	49.0	30.5	18.2	12.7	10.4	8.87	6.08	5.08	2.67
10.2V	97.7	77.6	47.5	29.8	18.0	12.6	10.3	8.81	6.04	5.07	2.66
10.5V	93.5	74.9	46.4	29.2	17.7	12.5	10.3	8.75	6.00	5.04	2.64
10.8V	88.2	71.0	44.7	28.3	17.3	12.1	9.94	8.49	5.82	5.00	2.63

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

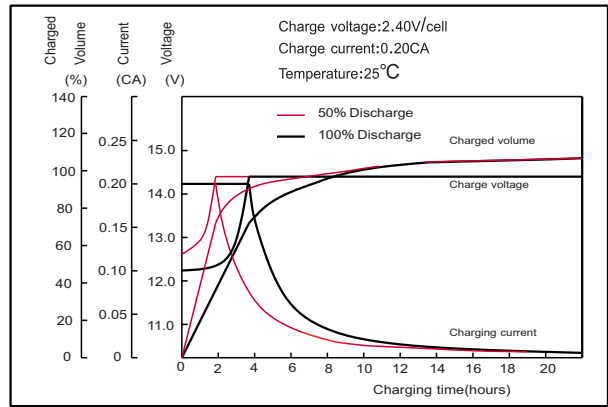
F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	1134	906	561	353	212	150	123	105	72.7	60.8	32.1
9.90V	1100	884	550	348	210	149	122	105	72.3	60.7	32.0
10.2V	1055	851	533	339	208	148	121	104	71.8	60.5	31.9
10.5V	1009	823	520	333	205	147	121	103	71.3	60.1	31.7
10.8V	953	779	501	322	200	143	117	100	69.1	59.7	31.5

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

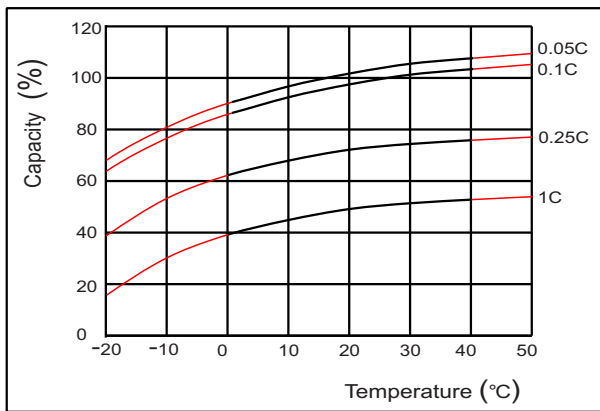
● Discharge characteristics(25°C)



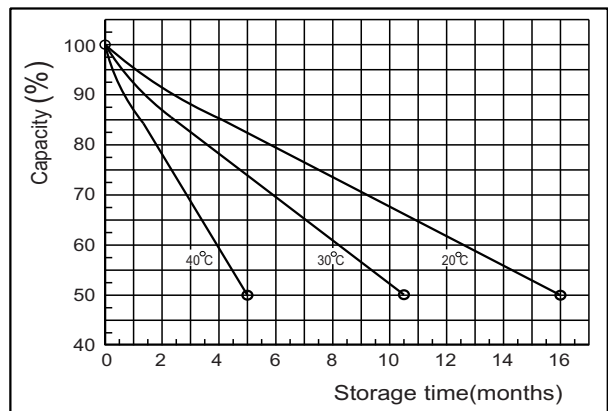
● Charging characteristics (25°C)



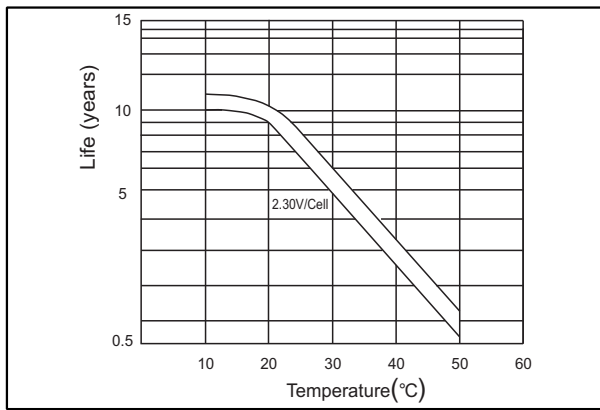
● Temperature effects on Capacity



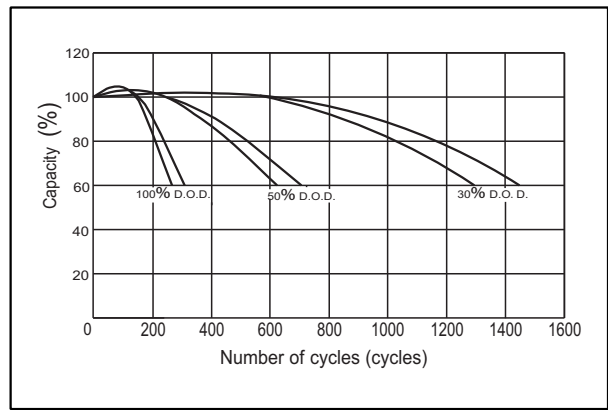
● Self-discharge characteristics



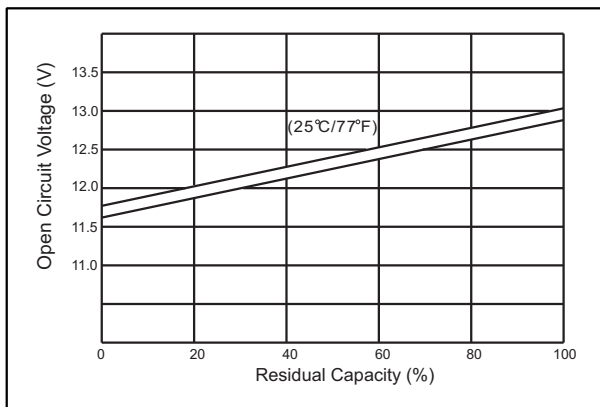
● Floating life on Temperature



● Cycle life on D.O.D (25°C)



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



● The relationship for Charging voltage and Temperature

