

NPG12-20Ah 12V20Ah

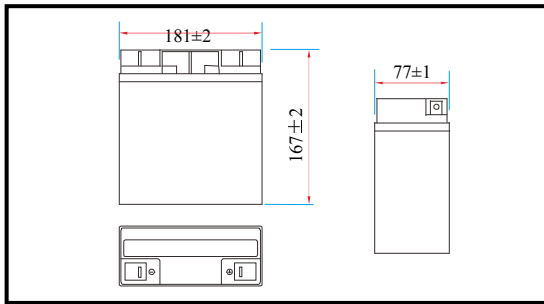
Valve Regulated Lead Acid Battery



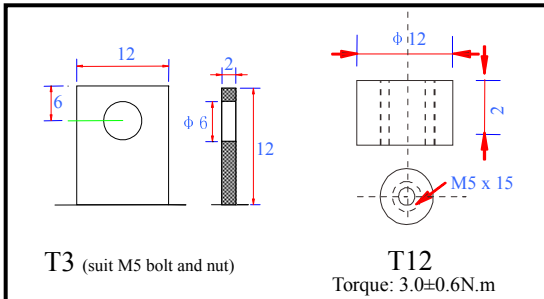
● Specifications

Nominal voltage	12V (6 cells per unit)	
Rated capacity (20HR)	18Ah/10.5V	
Dimensions	Length	181±2mm (7.13inch)
	Width	77±1mm (3.03inch)
	Height	167±2mm (6.57inch)
	Total height	167±2mm (6.57inch)
Approx. weight	5.80kg (12.79lbs)±4%	

● Outer dimensions (mm)



● Terminal type (mm)



● Characteristics

Capacity (25°C)	20HR (10.5V)	20Ah
	10HR (10.5V)	18Ah
	1HR (9.60V)	12Ah
Terminal type		T3/T12
Internal resistance (Fully charged, 25°C)		Approx. 13mΩ
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%
	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/Block
Cyclic charging voltage (25°C)		14.40 to 14.70V Temperature compensation: -30mV/°C/Block
Maximum charging current		4A
Maximum discharge current		300A (5 sec.)
Short circuit current		520A
Design life	10 years for floating (25°C)	
	Eurobat (20°C): 10-12 years, long life.	

● Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Gel	Rubber	Copper

● Constant current discharge characteristics unit: Ampere/Block (at 25°C, 77°F)

F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	61.6	42.0	35.0	20.4	12.4	7.00	4.94	4.00	3.37	1.86	1.02
9.90V	59.8	40.7	34.2	20.0	12.2	6.96	4.91	3.97	3.35	1.85	1.01
10.2V	57.3	39.1	32.9	19.4	11.9	6.90	4.87	3.95	3.32	1.84	1.01
10.5V	54.8	37.4	31.8	18.9	11.7	6.80	4.84	3.92	3.30	1.83	1.00
10.8V	51.7	35.3	30.1	18.2	11.3	6.62	4.69	3.80	3.20	1.79	0.98

● Constant power discharge characteristics unit: Watt/Block (at 25°C, 77°F)

F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	687	474	399	234	144	81.9	58.6	47.6	40.2	22.3	12.2
9.90V	667	460	389	229	141	81.5	58.3	47.3	40.0	22.2	12.1
10.2V	639	441	375	222	138	80.7	57.9	47.0	39.7	22.1	12.1
10.5V	612	422	362	217	135	79.5	57.5	46.7	39.4	22.0	12.0
10.8V	577	398	343	209	131	77.5	55.8	45.3	38.2	21.5	11.8

Note 1: Above characteristics data can be obtained within three charge and discharge cycles.

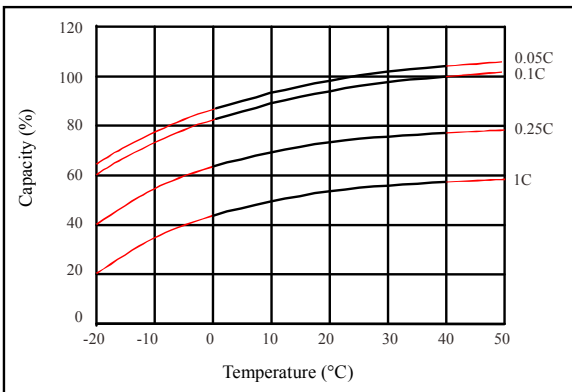
● Discharge characteristics (25°C)



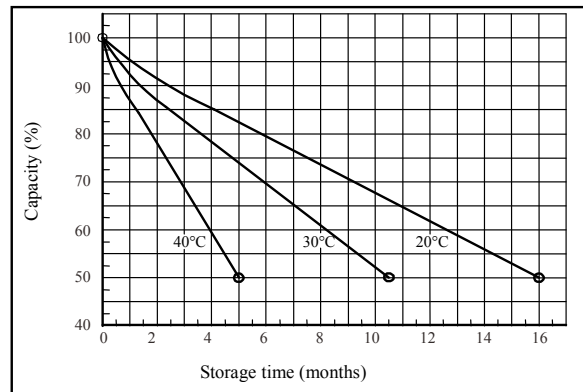
● Charging characteristics (25°C)



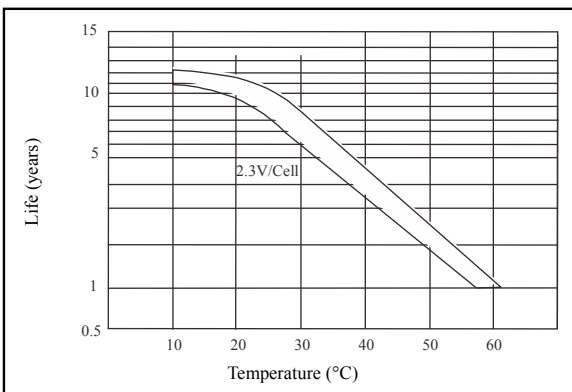
● Temperature effects on capacity



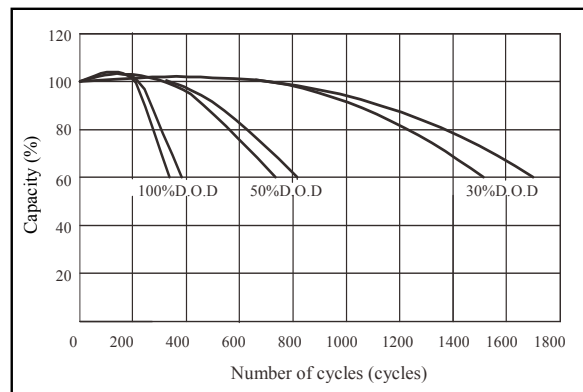
● Self-discharge characteristics



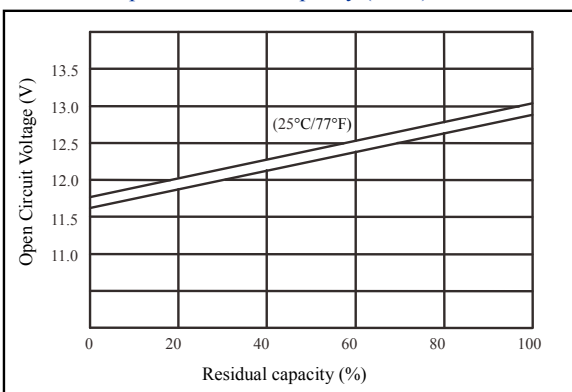
● Floating life on temperature



● Cycle life on D.O.D (25°C)



● Relationship for OCV and capacity (25°C)



● Relationship for charging voltage and temperature

