

## NPD12-45Ah 12V45Ah

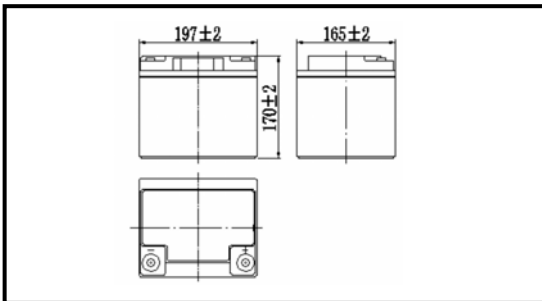
### Valve Regulated Lead Acid Battery



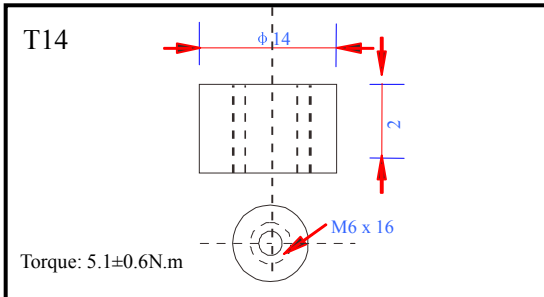
#### Specifications

Nominal voltage	12V (6 cells per unit)	
Rated capacity (10HR)	45Ah/10.8V	
Dimensions	Length	197±2mm (7.76inch)
	Width	165±2mm (6.50inch)
	Height	170±2mm (6.69inch)
	Total height	170±2mm (6.69inch)
Approx. weight	14.50kg (31.97lbs)±3%	

#### Outer dimensions (mm)



#### Terminal type (mm)



#### Characteristics

Capacity (25°C)	10HR (10.8V)	45Ah
	3HR (10.8V)	33Ah
	1HR (10.5V)	25Ah
Terminal type		T14
Internal resistance (Fully charged, 25°C)		Approx. 7.5mΩ
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)		14.50 to 15.00V Temperature compensation: -30mV/°C/Block
Maximum charging current		13.5A
Maximum discharge current		400A (5 sec.)
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	Sulfuric acid	Rubber	Copper

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

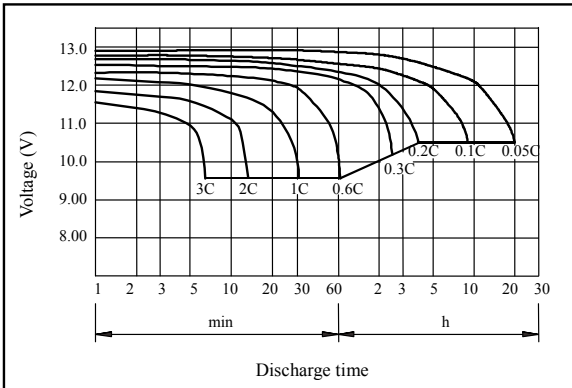
F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	100	77.1	46.1	28.4	16.4	11.8	9.46	8.08	5.55	4.58	2.43
9.90V	97.1	75.3	45.2	27.9	16.3	11.8	9.40	8.03	5.52	4.57	2.42
10.2V	93.1	72.5	43.8	27.2	16.2	11.7	9.33	7.98	5.48	4.56	2.42
10.5V	89.1	70.0	42.8	26.4	16.0	11.6	9.27	7.92	5.45	4.53	2.40
10.8V	84.1	66.3	41.2	25.5	15.6	11.3	8.99	7.68	5.28	4.50	2.39

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

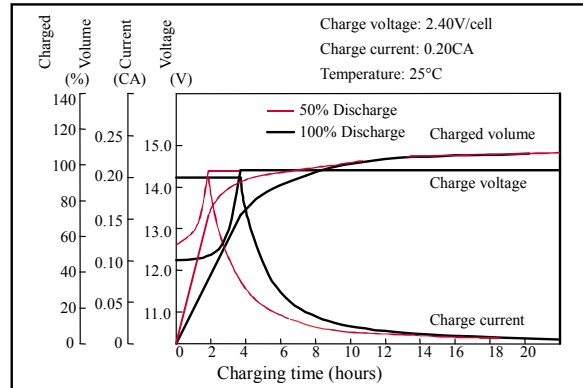
F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	1081	847	518	323	190	139	111	95.5	66.0	54.7	29.1
9.90V	1048	826	507	319	189	138	111	94.9	65.6	54.6	29.1
10.2V	1005	796	492	310	188	137	110	94.3	65.1	54.4	29.0
10.5V	962	769	480	301	185	137	109	93.6	64.7	54.1	28.8
10.8V	908	728	462	291	180	132	106	90.8	62.7	53.7	28.6

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

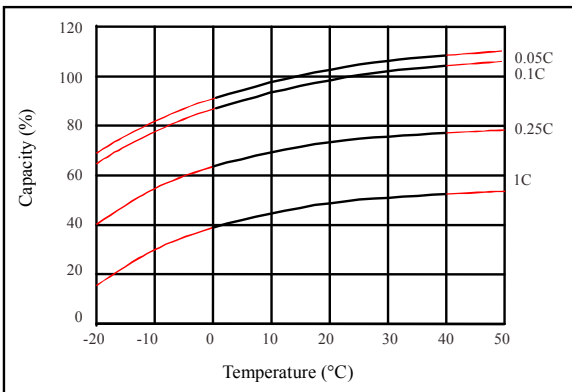
### ● Discharge characteristics (25°C)



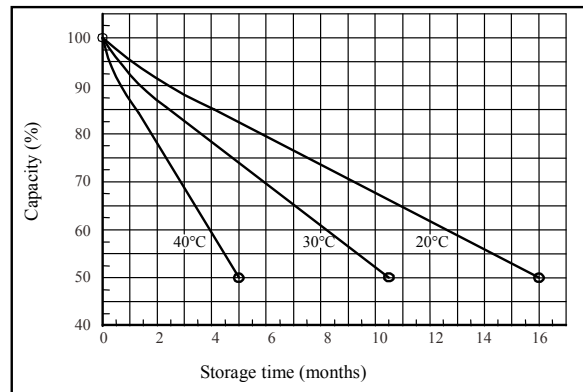
### ● Charging characteristics (25°C)



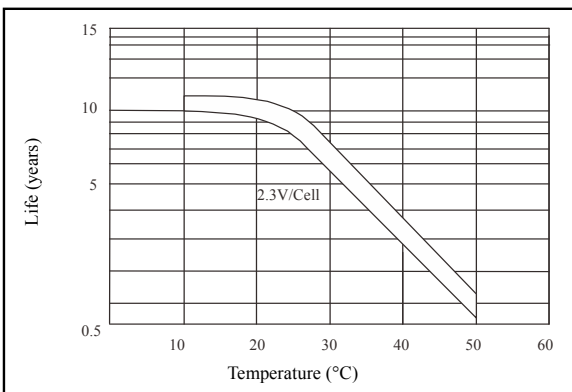
### ● Temperature effects on capacity



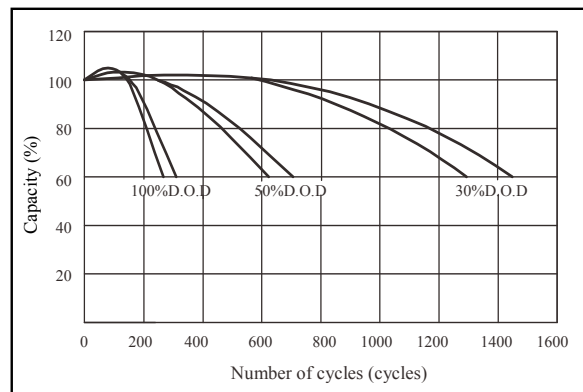
### ● Self-discharge characteristics



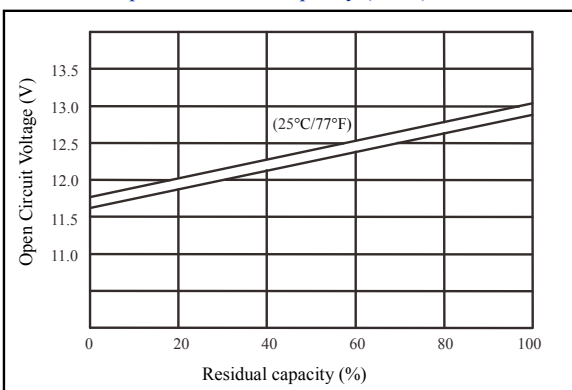
### ● Floating life on temperature



### ● Cycle life on D.O.D (25°C)



### ● Relationship for OCV and capacity (25°C)



### ● Relationship for charging voltage and temperature

