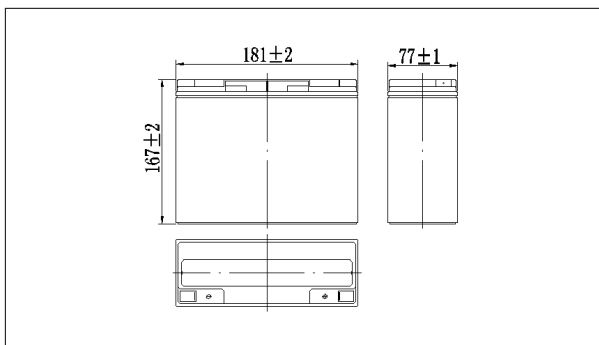


NPD12-20Ah 12V20Ah

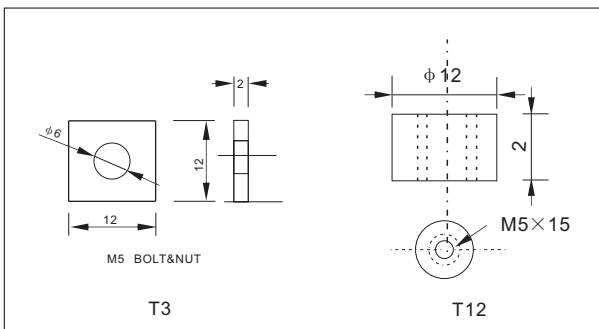
● Specifications

Nominal Voltage		12V
Rated capacity (20 hour rate)		20Ah
Dimensions	Length	181±2mm(7.13inch)
	Width	77±1mm(3.03inch)
	Height	167±2mm(6.57inch)
	Total Height	167±2mm(6.57inch)
Approx. Weight		5.7kg(12.6lbs)±4%

● Outer dimensions (mm)



● Terminal Type (mm)



● Characteristics

Capacity (25°C)	20HR(10.5V)	20Ah
	10HR(10.5V)	19Ah
	1HR(9.60V)	12Ah
Terminal type		T3/T12
Internal resistance (Fully charged,25°C)		Approx. 12m 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		6A
Maximum discharge current		300A(5 sec.)
Designed floating life(20°C)		5 years

● 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	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	78.3	49.6	38.7	21.8	13.4	7.35	5.08	4.20	3.58	1.94	1.04
9.90V	76.0	48.1	37.8	21.4	13.2	7.30	5.05	4.18	3.55	1.93	1.04
10.2V	72.8	46.1	36.4	20.7	12.9	7.24	5.02	4.15	3.53	1.92	1.03
10.5V	69.7	44.2	35.2	20.2	12.6	7.13	4.98	4.12	3.51	1.91	1.03
10.8V	65.8	41.7	33.3	19.5	12.2	6.95	4.83	4.00	3.40	1.87	1.00

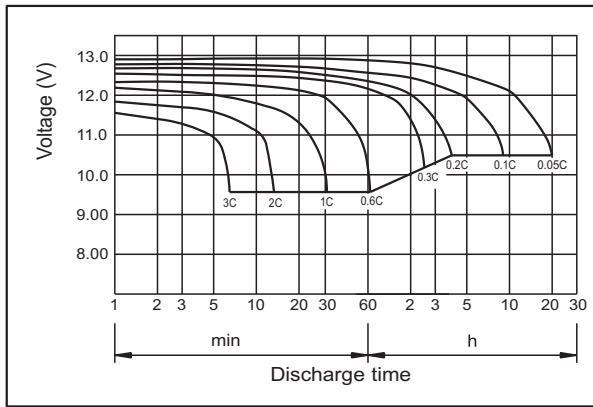
● Constant Power Discharge Characteristics Unit:W(25°C,77°F)

F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	874	560	442	250	155	85.9	60.4	50.1	42.7	23.3	12.5
9.90V	848	543	431	245	153	85.4	60.0	49.8	42.4	23.2	12.4
10.2V	813	520	415	238	149	84.7	59.6	49.4	42.1	23.1	12.4
10.5V	778	498	401	232	146	83.4	59.2	49.1	41.9	23.0	12.3
10.8V	734	470	380	223	142	81.3	57.4	47.6	40.6	22.5	12.1

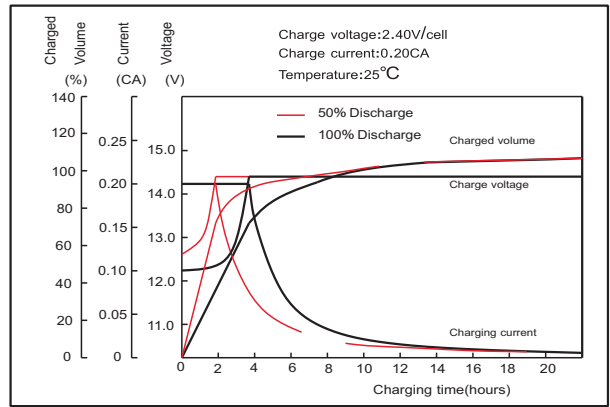
Note: The above characteristics data can be obtained within three charge or discharge cycles.

NPD12-20Ah 12V20Ah

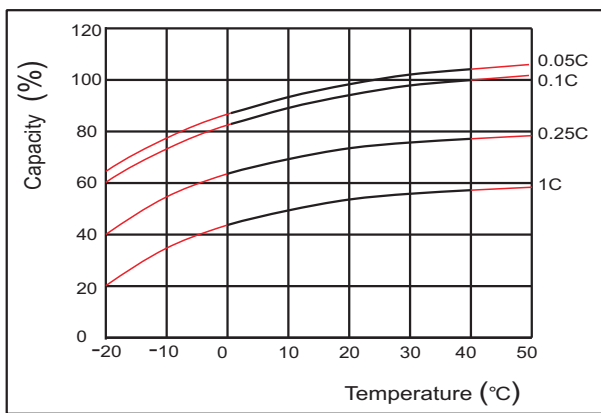
Discharge characteristics(25°C)



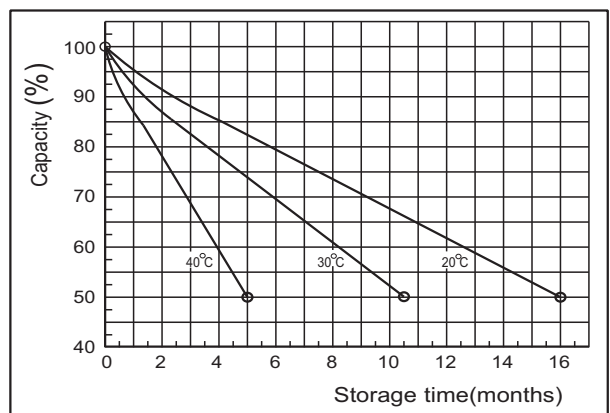
Charging characteristics (25°C)



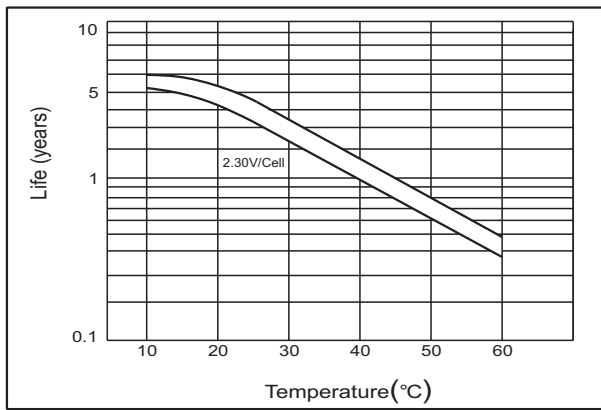
Effect of temperature on capacity



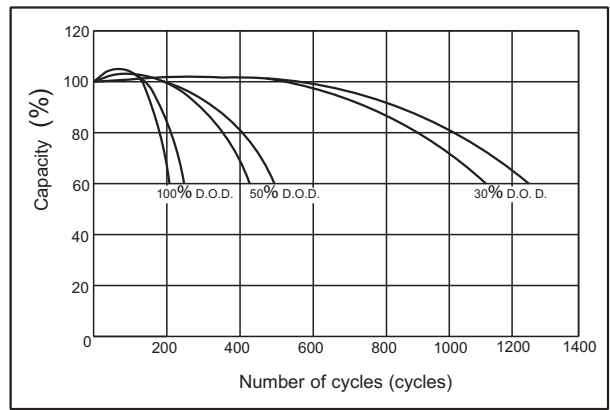
Self-discharge characteristics



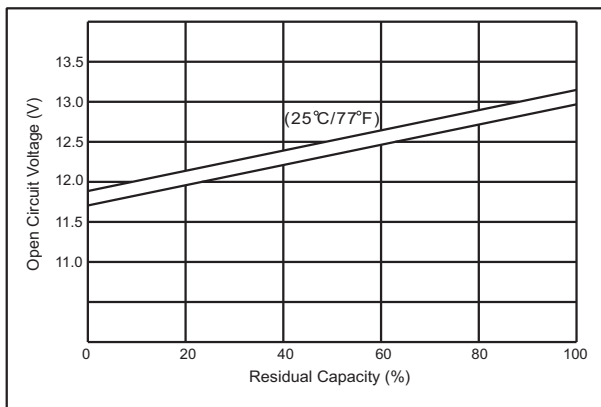
Floating life on temperature



Cycle life on D.O.D (25°C)



The relationship for OCV and residual capacity (25°C)



The relationship for charging voltage and temperature

