



NP Series lead-acid battery

Applications

- › UPS/EPS
- › Power systems
- › Telecommunications system
- › Emergency lighting, Auto control system
- › Solar/wind generating storage cyclic
- › Other general purpose

Specification

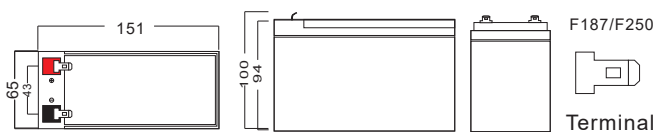
Nominal Voltage	12V
Nominal Capacity	9.0Ah
Design life	5 years
Terminal	F187/F250
Approx. Weight	Approx 2.50kg (5.52lbs)
Container Material	ABS
Rated Capacity	9.00Ah 20Hour Rate (0.45A to 10.5V)
	6.99Ah 3Hour Rate (2.33A to 10.5V)
	5.94Ah 1Hour Rate (5.94A to 9.60V)
Internal resistance	Full charged at 25°C: 20.0 mΩ
Max. Discharge Current	135A(5S)
Operating Temperature	Discharge: -20 ~50 (-4~ 122°F)
	Charge: -20 ~50 (-4~ 122°F)
	Storage: -20 ~50 (-4~ 122°F)
Charge current: Max. 2.25A ; Recom.0.90A	
Charge Method (25 °C)	Float Charge:13.5-13.8V,recom.13.8V(-18mV/ °C)
	Equalize charge:13.8-14.1V,recom.14.1V(-24mV/ °C)
	Cycle charge:14.4-15.0V,recom.14.7V(-30mV/ °C)
Self discharge	3% of capacity declined per month at 25°C

General Features

- › High corrosion resistant performance: Pb-Ca multi-alloy grid
- › High energy density and power density
- › Optimized capability of instant high-current discharging
- › Excellent charge acceptance ability
- › Excellent deep cycle discharge capability
- › Strong high and low temperature performance
- › Precision sealing technology



Dimension: 151(L)×65(W)×94(H)×100(TH) Unit: mm



Constant Current Discharge Characteristics Unit: A (25C)

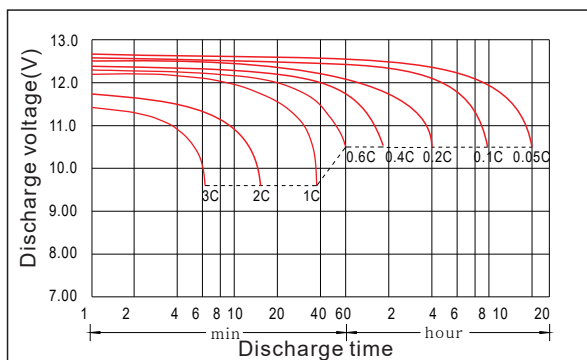
FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	35.6	23.3	17.4	11.4	5.94	3.40	2.48	1.99	1.69	1.12	0.891	0.477
1.65V	35.4	22.3	15.9	10.8	5.58	3.27	2.41	1.93	1.66	1.10	0.882	0.468
1.70V	29.0	21.0	14.9	10.5	5.40	3.20	2.37	1.83	1.64	1.08	0.864	0.459
1.75V	26.9	20.0	13.9	10.2	5.21	3.12	2.33	1.80	1.57	1.05	0.846	0.450
1.80V	24.8	18.8	12.9	9.90	5.03	3.04	2.21	1.76	1.50	1.03	0.828	0.432

Constant Power Discharge Characteristics Unit: W/cell(25C)

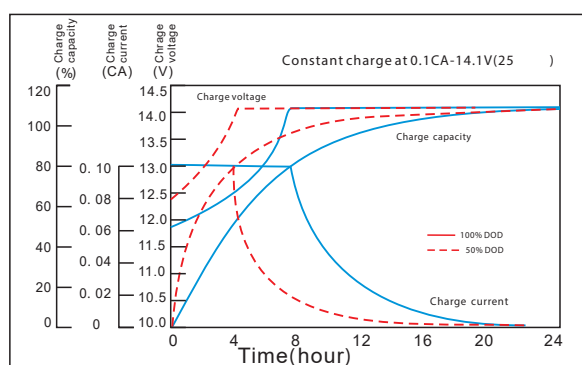
FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	66.9	42.0	31.8	19.2	10.9	6.38	4.70	3.77	3.20	2.11	1.73	0.945
1.65V	61.7	39.8	29.9	19.1	10.2	6.14	4.56	3.65	3.14	2.07	1.69	0.920
1.70V	56.4	38.6	28.5	19.0	9.93	6.02	4.49	3.47	3.05	2.05	1.68	0.912
1.75V	51.2	37.4	27.5	18.8	9.65	5.88	4.43	3.42	2.99	1.97	1.64	0.893
1.80V	45.9	36.2	26.3	18.7	9.51	5.84	4.31	3.39	2.91	1.90	1.61	0.887

NP Series lead-acid battery

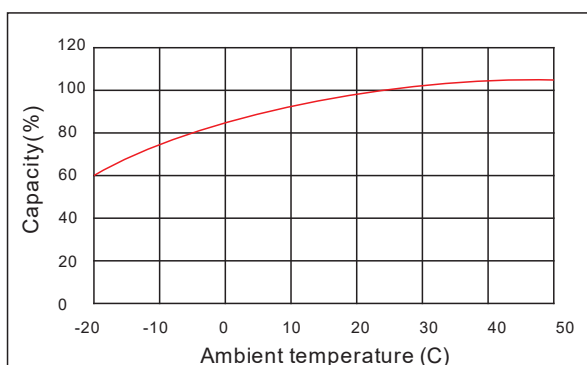
Discharge characteristic



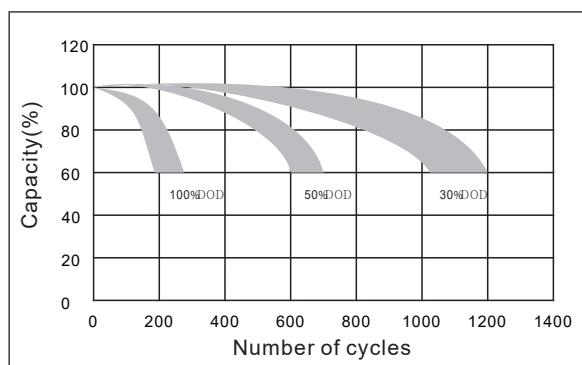
Charging characteristic



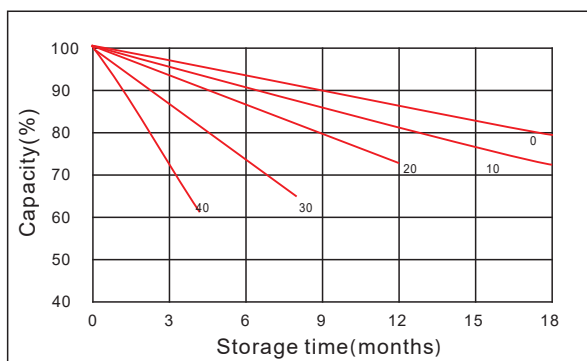
The effect of temperature on capacity



The effect of discharge depth on cycle life



Curves of self-discharge



The effect of temperature on float life

