



### Applications

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

### Specification

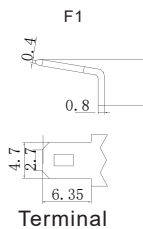
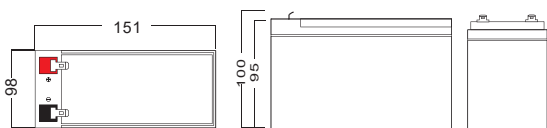
Nominal Voltage	12V
Nominal Capacity	12.0 Ah
Design life	5 years
Terminal	F1/F2/F3
Approx. Weight	Approx 3,40kg (7,5lbs)
Container Material	ABS
Rated Capacity	<b>12.0 Ah</b> 20Hour Rate (0.60 A to 10.5V)
	<b>9.48 Ah</b> 3Hour Rate (3.16 A to 10.5V)
	<b>7.92 Ah</b> 1Hour Rate (7.92 A to 9.60V)
Internal resistance	Full charged at 25°C: 18.0 mΩ
Max. Discharge Current	180 A(5S)
Operating Temperature	Discharge: -20 ~50 (-4~ 122°F)
	Charge: -20 ~50 (-4~ 122°F)
	Storage: -20 ~50 (-4~ 122°F)
Charge current	Max. 3.00A ; Recom.1.20A
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) x 98(W) x 100(TH) Unit mm



### Constant Current Discharge Characteristics Unit: A (25C)

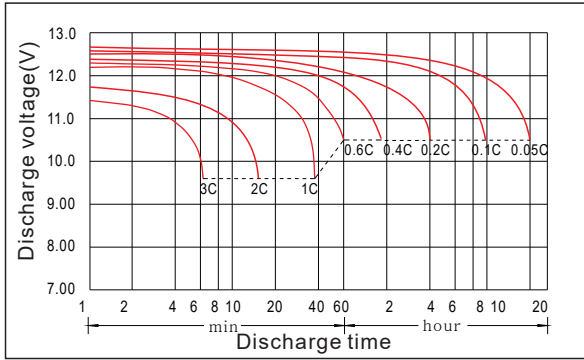
FV/Time	5min	10min	15min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	47.5	31.1	23.2	15.2	9.72	7.92	4.84	4.54	3.31	2.65	2.26	1.72	1.49	1.19	0.636
1.65V	47.2	29.8	21.2	14.4	9.13	7.44	4.80	4.36	3.22	2.57	2.21	1.70	1.46	1.18	0.624
1.70V	38.6	28.0	19.8	14.0	8.83	7.20	4.68	4.27	3.16	2.44	2.18	1.66	1.44	1.15	0.612
1.75V	35.9	26.6	18.5	13.6	8.53	6.95	4.60	4.16	3.11	2.40	2.09	1.63	1.40	1.13	0.600
1.80V	33.9	25.1	17.2	13.2	8.23	6.71	4.47	4.06	2.94	2.35	2.00	1.59	1.37	1.10	0.576
1.85V	29.5	23.3	15.3	12.1	7.62	6.22	4.34	3.86	2.77	2.28	1.91	1.54	1.31	1.07	0.566

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

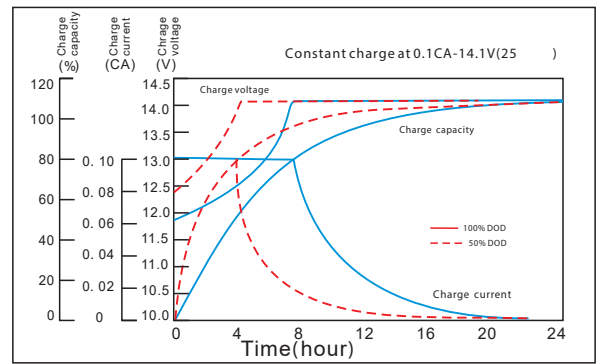
FV/Time	5min	10min	15min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	89.2	56.0	42.4	25.6	17.4	14.5	9.71	8.50	6.26	5.02	4.26	3.37	2.81	2.30	1.26
1.65V	82.2	53.0	39.8	25.5	16.4	13.7	9.54	8.18	6.08	4.86	4.18	3.31	2.77	2.26	1.23
1.70V	75.2	51.4	38.0	25.4	15.8	13.2	9.45	8.02	5.98	4.62	4.06	3.29	2.74	2.24	1.22
1.75V	68.2	49.8	36.6	25.1	15.5	12.9	9.24	7.84	5.90	4.56	3.98	3.21	2.63	2.19	1.19
1.80V	61.2	48.2	35.0	24.9	15.2	12.7	9.03	7.78	5.74	4.52	3.88	3.14	2.54	2.14	1.18
1.85V	54.6	45.1	31.3	22.8	14.3	11.9	8.89	7.43	5.46	4.45	3.70	3.09	2.43	2.11	1.17

## NP Series lead-acid battery

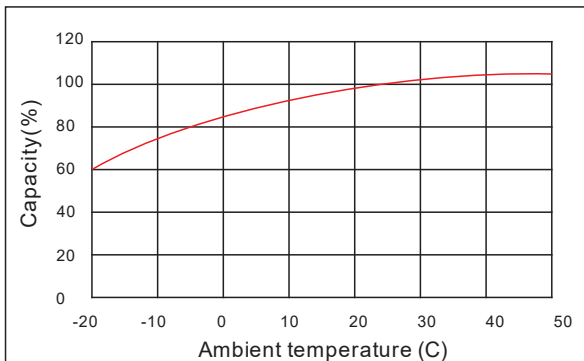
Discharge characteristic



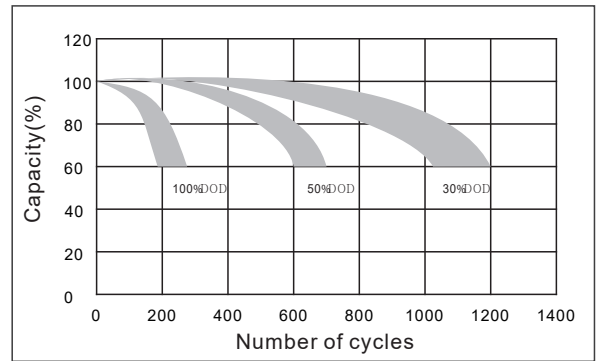
Charging characteristic



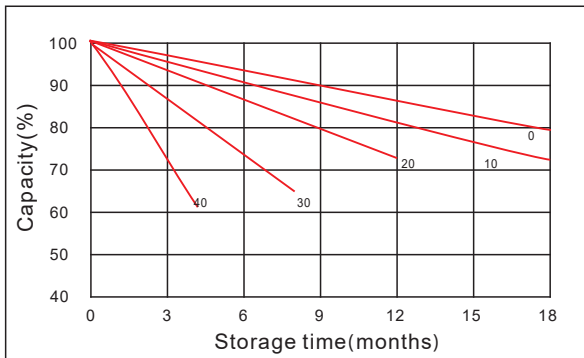
The effect of temperature on capacity



The effect of discharge depth on cycle life



Curves of self-discharge



The effect of temperature on float life

