

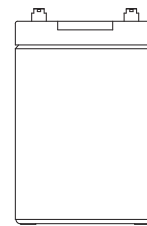
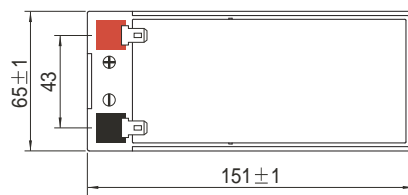
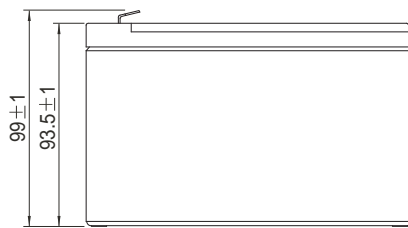
NPX 12-9

NPX 12-9 is a general purpose High Rate VRLA battery with 10 years floating design life, meet with IEC 60896-21, 60896-22, JIS standard. With heavy duty grid, thickness plates, special additives, NPX series have long and reliable standby service life.

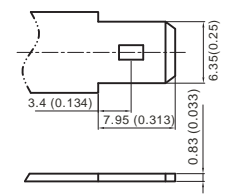


Physical Characteristics		Technical Characteristics	
Nominal Voltage	12V	Internal Resistance	Approx. 19 mΩ
Nominal Capacity (20hrs)	8.6Ah	Recommended Charging Current at 20C	2.58 A
Dimension LxWxH	151 x 65 x 99 +/-2mm	Float charging Voltage	13,5 to 13,8 VDC/unit Average at 20C
Weight	Approx 2,66 kg	Equalization and Cycle Service	14,4 to 15,0 VDC/unit Average at 20C
Standard Terminal	T2	Max Discharge Current	129A (5sec)

Dimensions



Terminal: T2



Container Material : A.B.S. UL94-HB

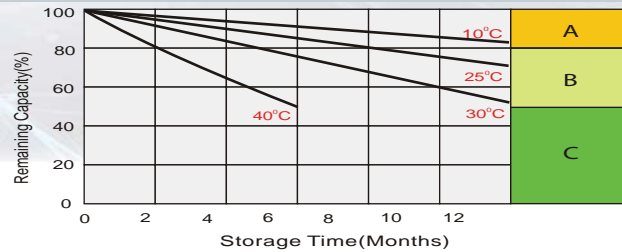
Constant Current & Power Discharge Characteristics: Amperes (25C) / Watts/cell (25C)

Final Voltage	Time	5min	10min	15min	20min	30min	45min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	8Hr	10Hr	20Hr
1,85V/cell	A	28.6	19.1	15.0	12.4	9.24	6.71	5.24	2.84	2.03	1.61	1.34	1.16	0.927	0.776	0.421
1,80V/cell	A	32.1	20.9	16.2	13.2	9.65	6.95	5.43	2.93	2.09	1.64	1.38	1.19	0.956	0.798	0.430
1,75V/cell	A	35.3	22.1	17.2	13.9	10.0	7.20	5.61	3.03	2.15	1.70	1.42	1.23	0.994	0.819	0.439
1,70V/cell	A	37.6	23.3	18.0	14.3	10.4	7.42	5.75	3.12	2.22	1.75	1.46	1.26	1.00	0.834	0.444
1,65V/cell	A	39.3	24.1	18.5	14.8	10.7	7.60	5.86	3.17	2.26	1.79	1.49	1.28	1.02	0.843	0.447
1,60V/cell	A	40.5	25.0	18.9	15.1	10.9	7.72	5.96	3.22	2.28	1.81	1.51	1.30	1.03	0.850	0.450
1,85V/cell	W	52.8	35.6	28.2	23.5	17.6	12.9	10.1	5.50	3.95	3.14	2.63	2.28	1.83	1.54	0.836
1,80V/cell	W	58.4	38.4	30.1	24.7	18.2	13.2	10.4	5.66	4.06	3.20	2.69	2.34	1.88	1.58	0.851
1,75V/cell	W	63.4	40.1	31.6	25.7	18.8	13.6	10.7	5.82	4.15	3.30	2.78	2.41	1.95	1.61	0.867
1,70V/cell	W	66.5	41.8	32.6	26.3	19.4	14.0	10.9	5.97	4.27	3.39	2.84	2.46	1.97	1.64	0.877
1,65V/cell	W	68.4	42.6	33.3	27.0	19.8	14.2	11.1	6.05	4.33	3.45	2.89	2.49	2.00	1.65	0.881
1,60V/cell	W	69.5	43.6	33.6	27.2	20.0	14.3	11.2	6.12	4.37	3.47	2.92	2.52	2.01	1.67	0.885

Capacity factors with different temperature

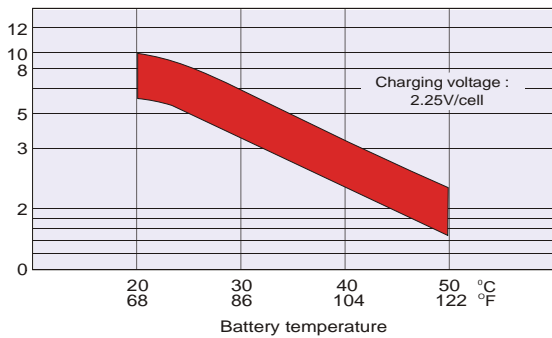
BATTERY TYPE		-20C	-10C	0C	5C	10C	20C	25C	30C	40C	45C
GEL BATTERY	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM BATTERY	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

Self discharge characteristics

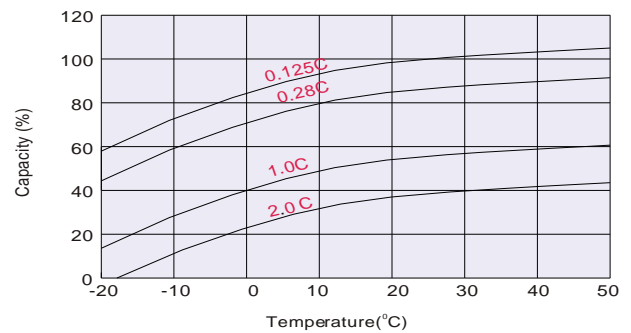


- A** No supplementary charge required
- B** Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
 2. Charged for above 20hours at limited current 0.25CA and constant voltage 2.475V/cell.
 3. Charged for 8-10hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

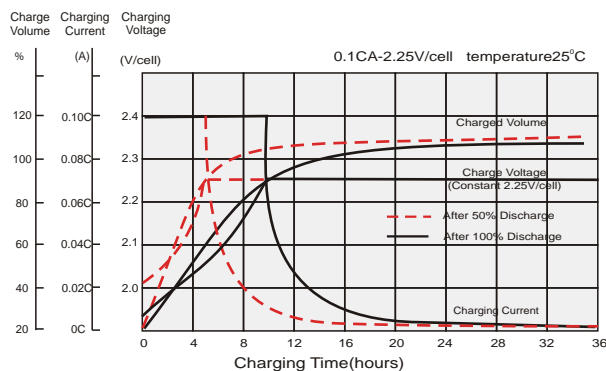
Effect of temperature on long term float life



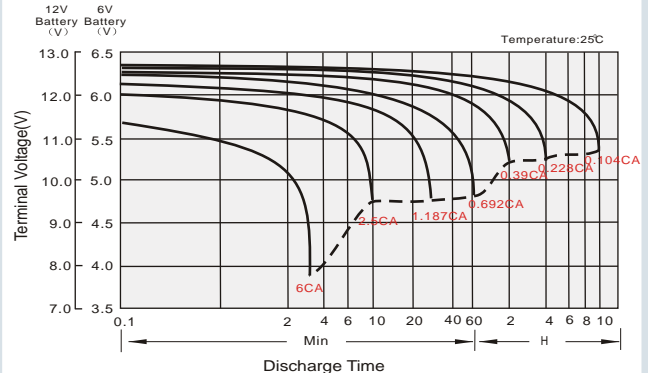
Temperature effects in relation to battery capacity



Float charging characteristics



Discharge characteristic curve



Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1,75V	1,70V	1,60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

Charge the batteries at least once every six months, if they are stored at 25C
Charging Method:

Constant Voltage	-0.2Cx2h=2.4~2.45V/Cellx24h, Max.Current 0.3CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h

Maintenance & Cautions

- Float Service:**
- * Every month, recommend inspection every battery voltage
 - * Every three months, recommend equalization charge for one time.
- Equalization charge method:**
- Discharge: 100% rate capacity discharge
 - Charge: Max. current 0.3CA, constant voltage 2,4-2,45V/Cell charge 24h
 - * Effect of temperature on float charge voltage: -3mV/C/Cell
 - * Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.