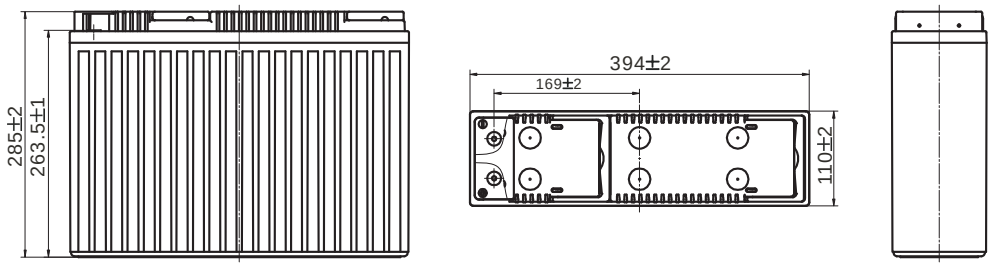
NRG POWER

NPF 12-100H (12V - 100Ah FT)

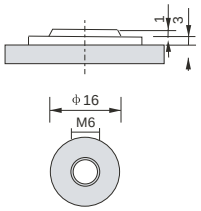
NPF 12-100H is front terminal type, specially designed for Telecom use with 10-12 years design life. The adoption of Centralized venting system makes sure the battery can be installed in any location, and guarantees high security and reliability. It is ideal for standard 19 inces or 23 inces power cabinets. All NPF series meet with IEC 60896-21, 60896-22, JIS standard and can be also used for UPS, standby power supply, power station and railway & marine applications.

Physical Charactiristics		Technical Characteristics	
Nominal Voltage	12V	**Internal Resistance**	Approx. 4.3 mΩ
Nominal Capacity (8hrs)	100Ah	**Recommended Charging Current at 25C**	30 A
Dimension LxWxH	394x110x285 +/-2mm	**Float charging Voltage**	13,5 to 13,8 VDC/unit Average at 25C
Weight	Approx 34,5kg	**Equalization and Cycle Service**	14,4 to 15,0 VDC/unit Average at 25C
Standard Terminal	T6	**Max Discharge Current**	1000A (5sec)

Dimensions



Terminal: T6



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

Constant Current & Power Discharge Characteristics: A (25C) / W (25C)

Final Voltage \ Time		10min	15min	20min	30min	45min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	8Hr	10Hr	20Hr
1,85V/cell	A	144.6	127.2	114.0	91.6	71.1	58.2	34.0	24.8	19.9	16.7	14.5	11.5	9.56	5.07
1,80V/cell	A	168.0	146.8	127.2	99.6	75.3	60.9	35.2	25.7	20.5	17.2	14.8	11.9	10.0	5.30
1,75V/cell	A	185.4	158.0	135.6	103.2	77.6	62.7	36.0	26.1	20.8	17.4	15.1	12.1	10.1	5.35
1,70V/cell	A	197.4	165.6	141.0	106.4	79.2	63.7	36.5	26.5	21.1	17.6	15.3	12.2	10.2	5.38
1,65V/cell	A	206.4	171.2	144.0	108.8	80.8	64.4	37.0	26.7	21.3	17.8	15.4	12.3	10.3	5.41
1,60V/cell	A	215.4	176.0	148.2	111.4	82.4	65.0	37.4	27.0	21.5	18.1	15.6	12.5	10.4	5.44
1,85V/cell	W	270.0	239.9	217.2	176.4	138.0	113.4	66.6	48.9	39.3	33.1	28.7	22.9	19.1	10.14
1,80V/cell	W	310.0	273.2	238.8	188.9	145.2	118.1	68.5	50.4	40.3	33.9	29.3	23.6	20.0	10.58
1,75V/cell	W	336.7	290.5	252.1	194.2	148.1	121.0	69.8	51.0	40.7	34.2	29.7	23.9	20.2	10.67
1,70V/cell	W	350.5	300.2	260.2	199.1	150.6	122.5	70.6	51.6	41.2	34.4	30.0	24.2	20.3	10.73
1,65V/cell	W	365.1	309.1	264.7	203.1	153.2	123.5	71.5	51.9	41.5	34.8	30.2	24.4	20.5	10.78
1,60V/cell	W	370.4	311.5	268.6	205.3	154.5	124.4	71.7	52.2	41.7	35.2	30.6	24.6	20.7	10.82

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%

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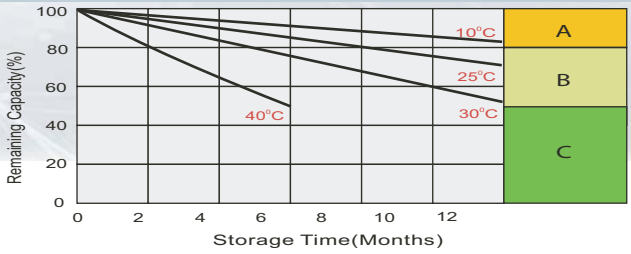
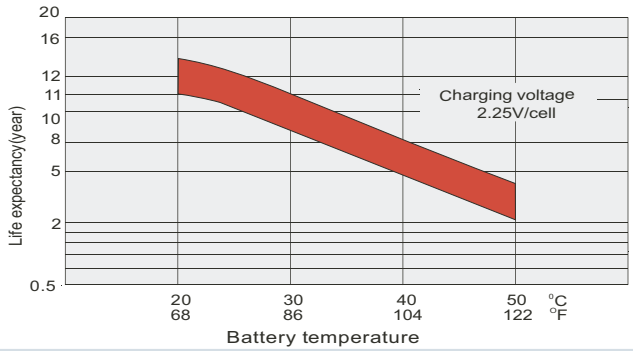
NPF 12-100H

Self discharge characteristics

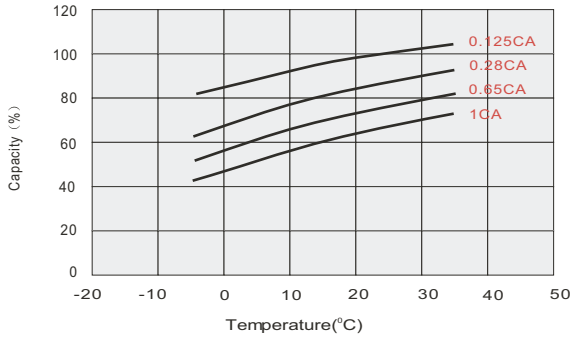


A	No supplementary charge required
B	Supplementary charge required before use.Optional charging way as below: 1.Charged for above 3 days at limted current 0.25CA and constant volatge 2.25V/cell. 2.Charged for above 20hours at limted current 0.25CA and constant volatge 2.475V/cell. 3.Charged for 8~10hours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

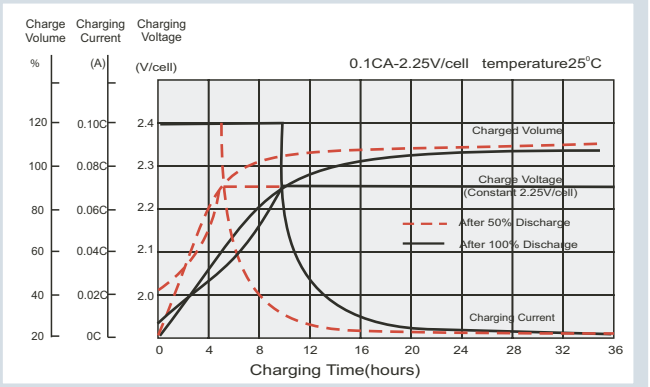
Effect of temperature on long term float life



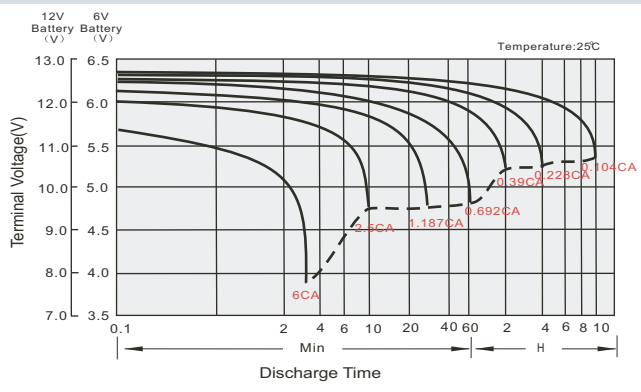
Temperature effects in relation to battery capacity



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.

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