

# NBN12-7

## Specification

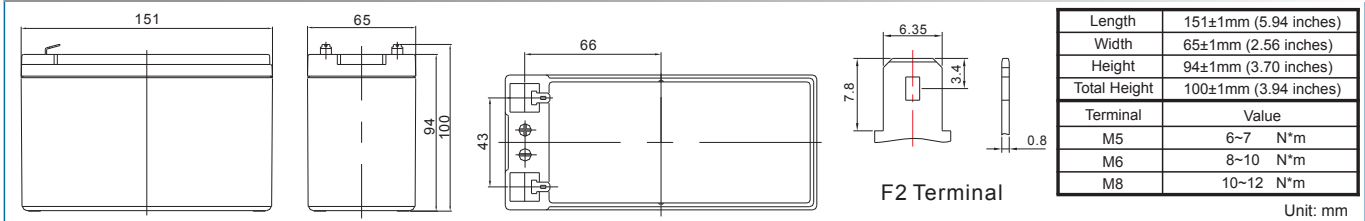
Cells Per Unit	6
Voltage Per Unit	12
Capacity	38W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 2.58 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 18 mΩ
Terminal	F2
Max. Discharge Current	90A (5 sec)
Short Circuit Current	445A
Design Life	6 years
Recommended Maximum Charging Current	2.7 A
Reference Capacity	C10 8.5AH C20 9.0AH
Standby Use Voltage	13.7 V~13.9 V @ 25°C
Cycle Use Voltage	14.6 V~14.8 V @ 25°C
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	Boardband high rate Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using.
Constainer Material	A.B.S. UL94-HB, UL94-V0 Optional.



The NBN series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service. By using strong grids and specially designed active material the HR series is with lower I.R, lower self discharge rate, high power, and longer service life performance. Generally the HR series offers 30% more power output than the standard range. Suitable for high power standby and cycling situation, such as UPS, datacenter, electric tools etc.



## Dimensions



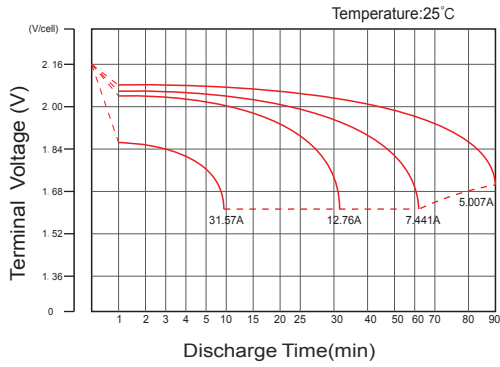
### Constant Current Discharge Characteristics : A (25°C)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	43.67	37.97	31.57	27.85	21.53	17.43	12.76	7.441	5.423
1.67V	40.40	35.13	29.61	26.13	20.41	16.26	12.16	7.091	5.163
1.70V	38.72	33.67	28.57	25.19	19.78	15.64	11.82	6.887	5.007
1.75V	36.58	31.80	27.14	23.65	18.85	15.21	11.49	6.774	4.895
1.80V	34.40	29.91	25.71	22.11	17.91	14.76	11.13	6.640	4.777
1.85V	32.10	27.92	24.18	20.49	16.89	14.24	10.72	6.481	4.633

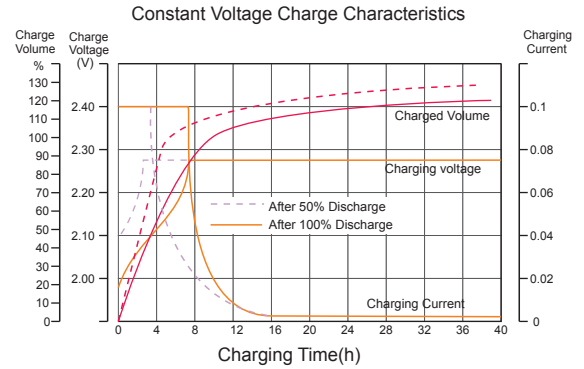
### Constant Power Discharge Characteristics : WPC (25°C)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	79.1	68.8	58.0	51.5	40.0	32.0	23.5	13.8	10.1
1.67V	73.9	64.3	54.9	48.8	38.3	30.2	22.6	13.2	9.7
1.70V	71.7	62.3	53.6	47.6	37.6	29.4	22.2	13.0	9.5
1.75V	68.5	59.6	51.6	45.2	36.3	28.9	21.9	13.0	9.4
1.80V	65.4	56.9	49.6	42.9	35.0	28.5	21.5	12.9	9.3
1.85V	62.3	54.1	47.6	40.6	33.6	28.0	21.2	12.8	9.2

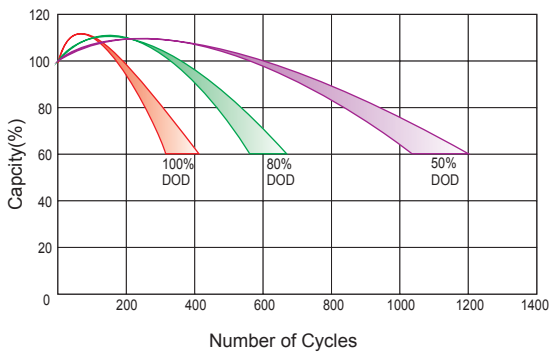
## Discharge Characteristics Curve



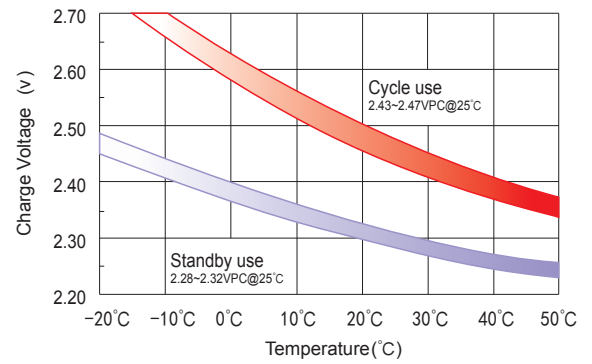
## Charge Characteristic Curve For Standby Use



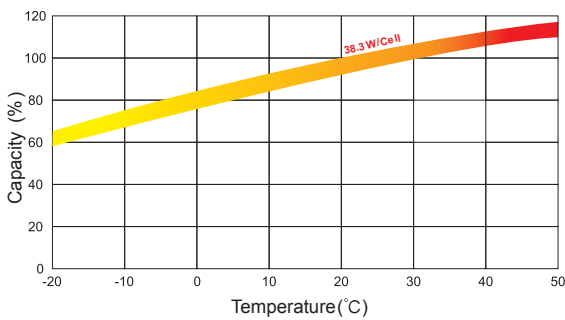
## Cycle Life In Relation To Depth Of Discharge



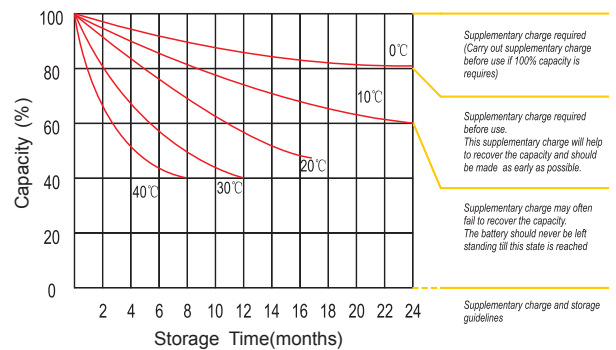
## Relationship Between Charging Voltage And Temperature



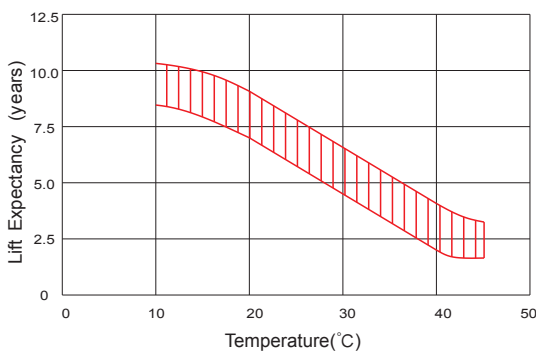
## Temperature Effects On Capacity



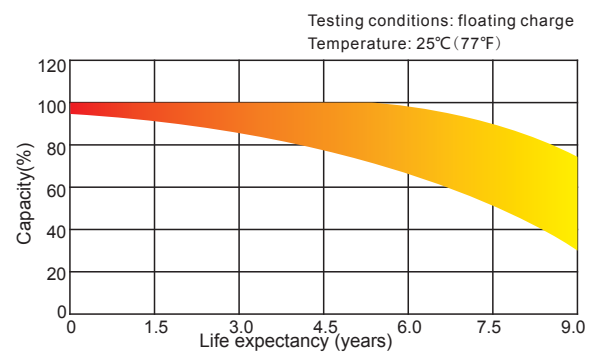
## Storage Characteristics



## Effect Of Temperature On Long Term Life



## Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, RICH reserves the right to explain and update the latest information