

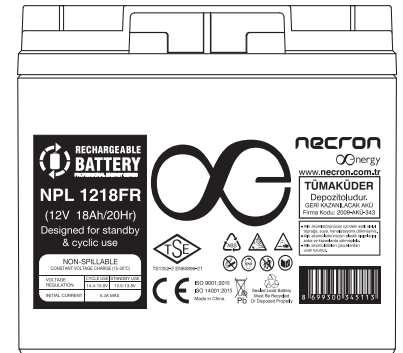
# NPL1218FR

Black Line 12V 18Ah

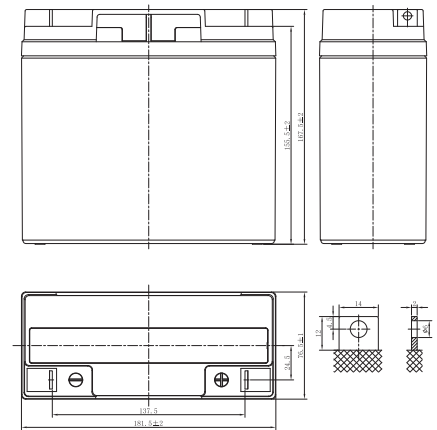


## Specifications

Rated Voltage	12V	
Nominal Capacity	18.0Ah	(C <sub>20</sub> , 1.75V/cell)
Dimension	Length	181.5±2mm (7.14 inches)
	Width	76.5±1mm (3.01 inches)
	Container Height	167.5±2mm (6.59 inches)
	Total Height	167.5±2mm (6.59 inches)
Approx Weight	5.4 Kg (11.9 lbs)	
Terminal	T3	
Container Material	Flame Retardant ABS (UL94-V0)	
Rated Capacity (25°C)	18.0 Ah	(20hr, 0.900A, 1.75V/cell)
	17.0 Ah	(10hr, 1.70A, 1.75V/cell)
	15.5 Ah	(5hr, 3.10A, 1.75V/cell)
	13.6 Ah	(3hr, 4.52A, 1.75V/cell)
	11.2 Ah	(1hr, 11.2A, 1.60V/cell)
Max. Discharge Current	270A (5s)	
Internal Resistance (25°C)	Approx 16mΩ	
Operating Temp. Range	Discharge	-15~50°C (5~122°F)
	Charge	0~40°C (32~104°F)
	Storage	-15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 5.4A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 5.4A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	≤3%/month @ 25°C	



## Layout



## Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	49.1	33.7	26.2	21.9	16.6	12.3	10.2	7.5	6.0	4.37	3.52	3.02	2.58	2.03	1.66	0.880
1.80V/cell	52.8	35.7	27.5	22.7	17.1	12.6	10.4	7.7	6.1	4.44	3.57	3.06	2.62	2.06	1.69	0.890
1.75V/cell	55.7	37.1	28.4	23.4	17.5	12.9	10.6	7.8	6.2	4.52	3.62	3.10	2.65	2.09	1.70	0.900
1.70V/cell	58.3	38.6	29.4	24.0	18.0	13.2	10.8	8.0	6.3	4.58	3.67	3.14	2.68	2.11	1.72	0.907
1.67V/cell	60.3	39.7	30.1	24.5	18.3	13.4	11.0	8.1	6.4	4.63	3.71	3.17	2.71	2.12	1.73	0.914
1.60V/cell	64.0	41.4	31.1	25.3	18.8	13.7	11.2	8.2	6.5	4.71	3.77	3.22	2.75	2.15	1.75	0.924

## Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	93.0	64.1	50.2	42.1	32.1	23.8	19.8	14.7	11.7	8.59	6.94	5.95	5.11	4.03	3.31	1.76
1.80V/cell	99.0	67.5	52.4	43.6	32.9	24.4	20.2	15.0	11.9	8.72	7.03	6.03	5.18	4.09	3.35	1.78
1.75V/cell	103.2	69.7	53.8	44.5	33.6	24.8	20.5	15.2	12.1	8.83	7.12	6.10	5.23	4.13	3.38	1.80
1.70V/cell	107.0	72.0	55.2	45.6	34.3	25.3	20.8	15.4	12.2	8.95	7.20	6.17	5.29	4.17	3.41	1.81
1.67V/cell	109.8	73.6	56.4	46.4	34.8	25.6	21.1	15.6	12.4	9.02	7.26	6.22	5.33	4.20	3.43	1.83
1.60V/cell	114.2	75.8	57.9	47.6	35.6	26.1	21.5	15.9	12.6	9.17	7.37	6.30	5.40	4.25	3.47	1.85



## Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

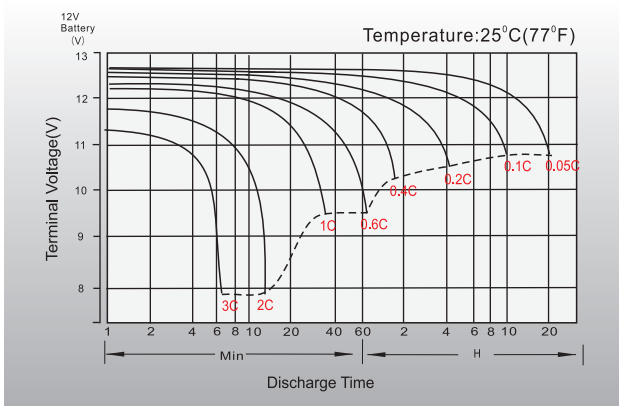
## General Features

- 10 years design life (25°C)
- ABS Material : Flame Retardent UL94-V0
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

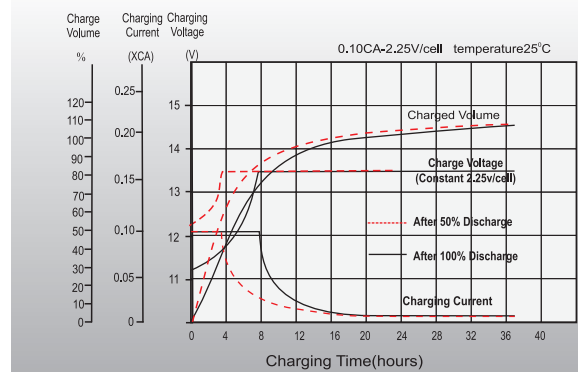
## Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in ISO45001, ISO 9001 and ISO 14001 certified production facilities

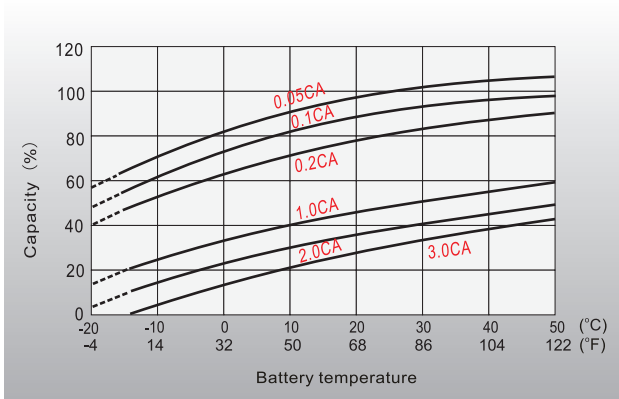
### Discharge Characteristics



### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Float Service Life

