



# Product Specification NP2-12FR

Product NO.  
175008

## Yuasa NP Series VRLA Battery, 5 Years Design Life

The Yuasa NP series is a high energy density Valve Regulated Lead Acid (VRLA) battery that uses advanced plate technology and sealed construction. Its unique sealing technique prevents electrolyte leakage when the battery is mounted either horizontally or vertically. Manufactured in Yuasa quality assured factories, the Yuasa NP series offers absolute reliability and minimal maintenance for end users.

- Sealed construction with pressure relief system
- Operation in any orientation (*except in an inverted position*)
- Heavy duty grids
- Low self discharge
- Wide operating temperature range (-15°C to +50°C)
- Recyclable materials used in battery

### General Performance

Battery	NP2-12FR	
Application	Floating	
Design Life	5 Years	
Nominal Capacity	2Ah	
Actual Capacity at 25°C	1 hour rate to 1.60Vpc	1.25Ah
	5 hour rate to 1.70Vpc	1.72Ah
	10 hour rate to 1.75Vpc	1.81Ah
	20 hour rate to 1.75Vpc	2.0Ah

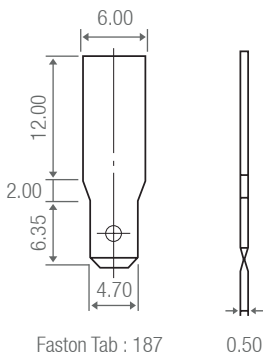


### Electrolyte

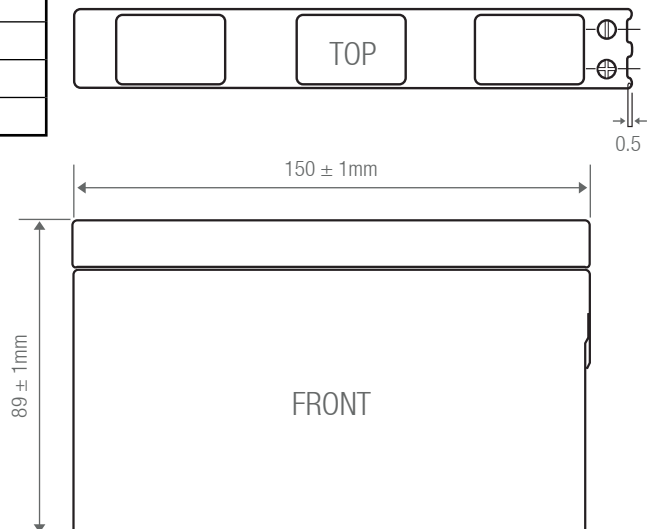
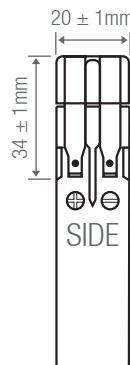
Fully charge density at 25°C	1.3
Density Range	1.290-1.310
Gelled/Absorbed	Absorbed
Mounting Orientation	Vertical/Horizontal

### Plates

Positive Plates:	
Number/cell	1
Type	Flat
Material of grid	Lead-Calcium-Tin Alloy
Thickness	3.2mm
Negative Plates:	
Number/cell	1
Type	Flat
Material of grid	Lead-Calcium-Tin Alloy
Thickness	2mm



mm	=	inch
12.00		0.472
6.35		0.250
6.00		0.236
4.70		0.185
2.00		0.079
0.50		0.020



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## Physical Properties

Separators	
Type	Glass Mat
Is glass fibre included?	Yes
Container & Cover Materials	
Lid Material, Colour	Acrylonitrile Butadiene Styrene ABS / Black
Container Material, Colour	Acrylonitrile Butadiene Styrene ABS / Grey
Flame Retardant	Yes
Safety Vent Operational Pressure	20kPa
Dimensions:	
Overall Width	150mm
Depth	20mm
Height	89mm
Battery Weight (kg)	
Total Weight (wet)	0.7kg

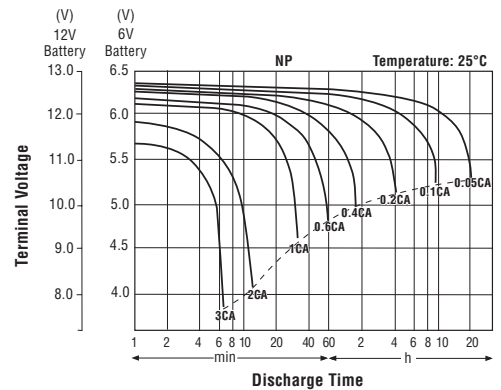
## Electrical Properties

Self Discharge Rate @ 20°C	<3% per month		
Normal Charge (Amperes)	0.2A		
Max. Charge (Amperes)	0.4A		
Internal Resistance (mOHMS)	180 mΩ		
Volts End of Charge	2.260Vpc @ 25°C		
	20°C	25°C	30°C
Float Voltage (Vpc)	2.275Vpc	2.260Vpc	2.245Vpc
Float Current (mA)	<2mA	<2mA	<2mA
Initial Short circuit current (A)	70		
Efficiency at 10 hour rate (%):			
Ampere-Hour	>90%		
Watt-Hour	>80%		

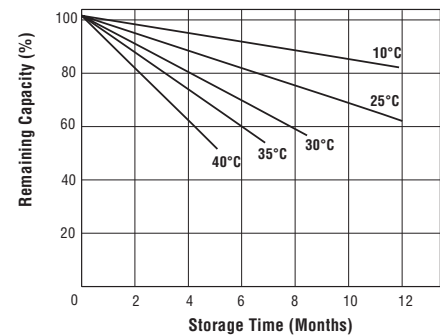
## Compliant Standard

Battery Standard	JIS C8702
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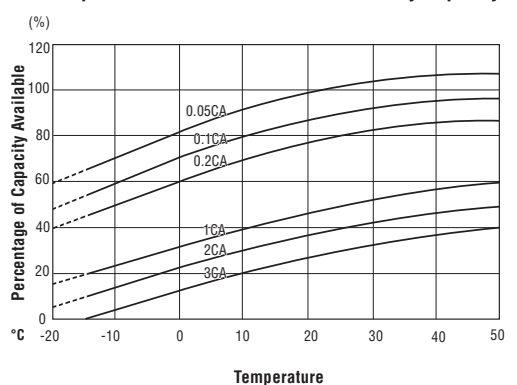
## Discharge Characteristic Curves: NP Batteries



## Self Discharge Characteristics



## Temperature Effects in Relation to Battery Capacity



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