



YUASA

NP/NPH/NPX SERIES SEALED RECHARGEABLE LEAD-ACID BATTERIES



Type	FR Type*	Volts	Normal Capacity (10 hr rate – AH)	Length		Width		Overall Height incl. Terminals		Weight		Layout	Terminals
				mm	(in.)	mm	(in.)	mm	(in.)	Kgs.	Lbs.		
NPH SERIES													
NPH2-12	NPH2-12FR	12	2.0	68.0	2.68	51.0	2.01	88.0	3.46	0.84	1.85	2	A
NPH3.2-12	NPH3.2-12FR		3.2	134.0	5.28	67.0	2.64	64.0	2.52	1.40	3.09	3	A
NP SERIES			20 hr Rate (Ah)										
NP4.2-4H	-	4	4.2	48.0	1.89	35.5	1.40	119.0	4.68	0.56	1.23	6	–
NP1.2-6	NP1.2-6FR	6	1.2	97.0	3.82	25.0	0.98	54.5	2.15	0.30	0.66	1	A
NP3-6	-		3.0	134.0	5.28	34.0	1.33	64.0	2.52	0.65	1.43	1	A
NP4-6	-		4.0	70.0	2.76	47.0	1.85	105.5	4.15	0.85	1.87	5	A
NP7-6	NP7-6FR		7.0	151.0	5.95	64.0	1.33	97.5	3.84	1.35	2.98	1	A/D
NP10-6	NP10-6FR		10.0	151.0	5.95	50.0	1.97	97.5	3.84	2.00	4.41	1	A/D
NP0.8-12	NP0.8-12FR**	12	0.8	96.0	3.78	25.0	0.98	61.5	2.42	0.35	0.77	7	I
NP1.2-12	NP1.2-12FR		1.2	97.0	3.82	48.0	1.89	54.5	2.15	0.57	1.25	3	A
NP2-12	-		2.0	150.0	5.91	20.0	0.79	89.0	3.50	0.70	1.54	8	B
NP2.3-12	NP2.3-12FR		2.3	178.0	7.01	34.0	1.34	64.0	2.52	0.94	2.07	1	A
NP2.6-12	NP2.6-12FR		2.6	134.0	5.28	67.0	2.64	64.0	2.52	1.12	2.47	3	A
NP4-12	NP4-12FR		4.0	90.0	3.54	70.0	2.76	106.0	4.17	1.70	3.74	1	A/D
NP7-12	NP7-12FR		7.0	151.0	5.94	65.0	2.56	97.5	3.84	2.65	6.17	4	A/D
NP12-12	NP12-12FR		12.0	151.0	5.94	98.0	3.86	97.5	3.84	4.00	8.82	4	D
NP18-12B	NP18-12BFR		17.2	181.0	7.13	76.2	2.99	167.0	6.57	6.20	13.64	2	E
NP24-12	NP24-12FR		24.0	166.0	6.54	175.0	6.89	125.0	4.92	8.65	19.05	2	C
NP24-12B	NP24-12BFR		24.0	166.0	6.54	175.0	6.89	125.0	4.92	8.65	19.05	2	E
-	NP26-12B		26.0	166.0	6.54	125.0	4.92	175.0	6.89	9.30	20.50	2	J
-	NP26-12R		26.0	166.0	6.54	125.0	4.92	175.0	6.89	9.30	20.50	2	K
-	NP38-12B		38.0	197.0	7.74	165.0	6.50	175.0	6.89	13.80	30.40	2	F
-	NP38-12R		38.0	197.0	7.74	165.0	6.50	175.0	6.89	13.80	30.40	2	K
NP65-12	NP65-12FR	65.0	350.0	13.78	166.0	6.54	174.0	6.85	22.80	50.20	2	G	
NPX SERIES			W/Cell to 1.67 End Voltage (15 Min Rate)										
NPX-50	NPX-50FR	6	50W/Cell	151.0	5.95	50.0	1.97	97.5	3.84	2.00	4.41	1	A/D
NPX-25	NPX-25FR	12	23W/Cell	90.0	3.54	70.0	2.75	106.0	4.17	2.00	4.41	1	D
NPX-35	NPX-35FR		35W/Cell	151.0	5.94	65.0	2.56	97.5	3.84	2.65	6.17	4	A/D
NPX-80	NPX-80FR		80W/Cell	181.0	7.13	76.2	2.99	167.0	6.57	6.60	14.50	2	E
-	NPX-100B		95W/Cell	166.0	6.54	125.0	4.92	175.0	6.89	9.30	20.80	2	J
-	NPX-100R		95W/Cell	166.0	6.54	125.0	4.92	175.0	6.89	9.30	20.80	2	K
-	NPX-150B	12	150W/Cell	197.0	7.76	165.0	6.50	175.0	6.89	15.50	34.10	2	J
-	NPX-150R		150W/Cell	197.0	7.76	165.0	6.50	175.0	6.89	15.50	34.10	2	K

* FR: UL94-VO, Flame Retardant Case and Cover (Oxygen index: 30)
 ** FR: UL94-V2, Flame Retardant Case and Cover (Oxygen index: 30)

† Recognized by UI File No. MH 12970
 ~ Recognized by UI File No. MH16464 - Made in the USA



The Yuasa brand of valve-regulated batteries have, since their introduction, set the standard for quality and excellence in the field of rechargeable sealed lead-acid battery technology. This standard has been used as a benchmark in applications such as security, uninterruptible power supplies (UPS), telecommunications, emergency lights and medical equipment. Anywhere the need for reliable and dependable back-up power is required, Yuasa sets the pace.

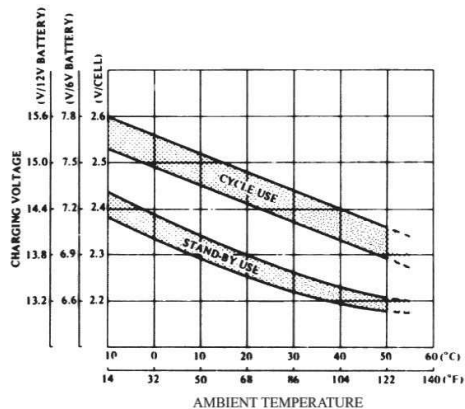
The Yuasa brand NP product line covers the entire spectrum of battery sizes, ranging from 0.8Ah to 65Ah in 4, 6, & 12 volt varieties. Yuasa also offers a full line of flame retardant batteries (UL94-V0, LOI 30). Designated "FR", these batteries comply with UL1778 flame retardant specifications for UPS and Bellcore requirements for telecommunications.

Yuasa also offers the NPX and NPH Series Batteries, designed for high rate discharge applications. These batteries are used primarily where high wattage is required for a short duration. With 50% more wattage available and a 30% reduction in size over conventional batteries, the NPX and NPH Series offers a superior value, especially in UPS applications.

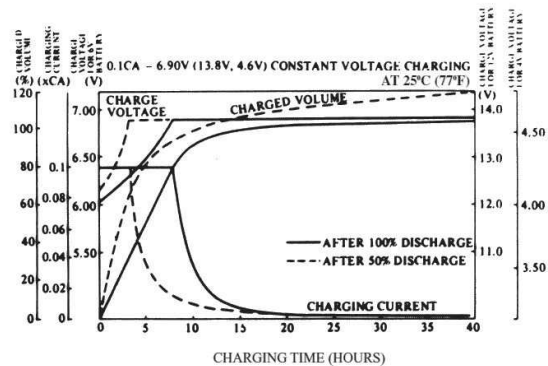
NPX Watts per Cell to 1.67 End Volts

	5 Min	10 Min	15 Min	20 Min
NPX-25	47	31	23	18
NPX-35	66	45	35	29
NPX-50	94	60	50	38
NPX-80	155	104	80	65
NPX-100	185	125	95	75
NPX-150	285	200	150	120

RELATIONSHIP BETWEEN CHARGING VOLTAGE AND TEMPERATURE

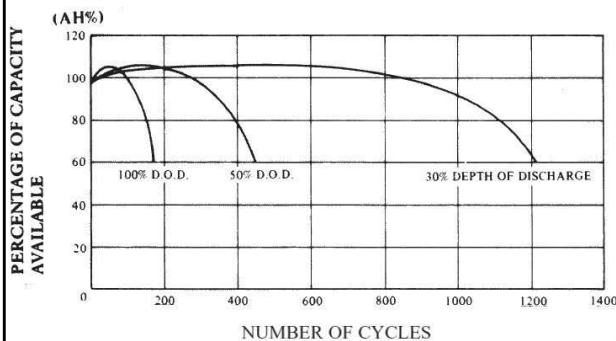


CHARGING CHARACTERISTICS



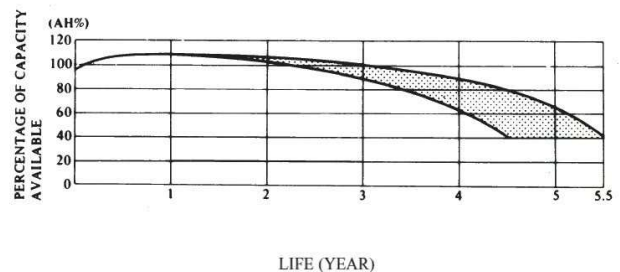
CYCLE SERVICE LIFE IN RELATION TO DEPTH OF DISCHARGE NP SERIES

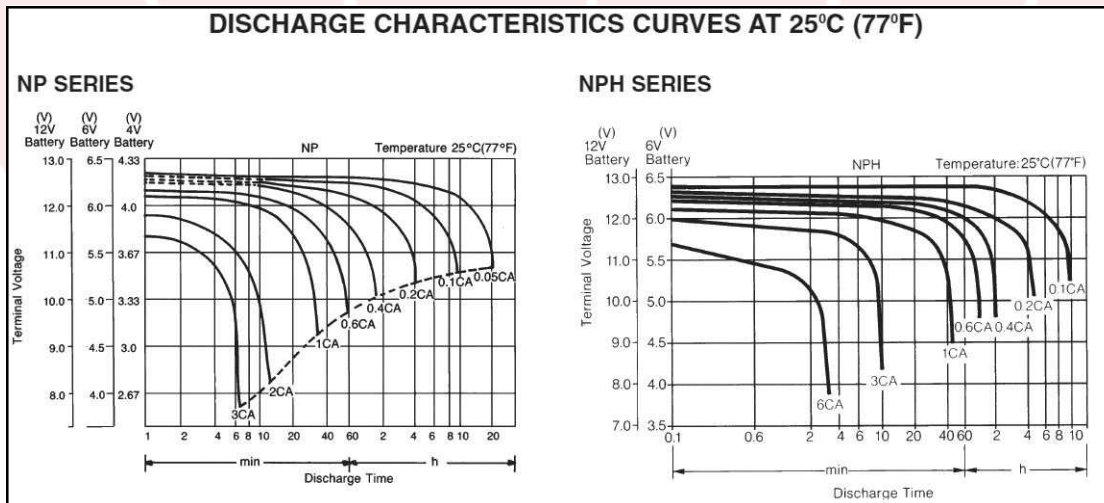
TESTING CONDITIONS: DISCHARGE CURRENT: 0.17C Amp. (F.V. 1.7V/CELL)
CHARGING CURRENT: 0.09C Amp.
CHARGING VOLUME: 125% OF DISCHARGED CAPACITY
AMBIENT TEMPERATURE: 20°C (68°F TO 77°F)



FLOAT SERVICE LIFE NP SERIES

TESTING CONDITIONS: FLOATING VOLTAGE: 2.25 TO 2.30V/CELL
AMBIENT TEMPERATURE: 20°C TO 22°C (68°F TO 72°F)





Important notes to prolong battery life:

Charging

Standby use: Apply constant voltage charging at 2.275 volts per cell (or 2.25–2.30VPC).

Cyclic use : Apply constant voltage charging at 2.40–2.50VPC.

Initial charging current should be set at less than 0.25CA.

Storage- 6 months- Top charge: Apply constant voltage at 2.40 volts per cell, initial charging current should be set at less than 0.1CA for 15 to 20 hours.

Discharge

Stop operation when voltage has reached the minimum permissible voltage.

Recharge immediately.

Do not operate at 6CA or more current continuously.

Storage

Always store battery in a fully charged condition.

If battery is to be stored for a long period, apply a recovery top-charge every 6 months.

Temperature

Keep within ambient temperatures of -15°C to $+50^{\circ}\text{C}$ for both charging and discharging.

Store batteries in a dry and cool location.

Incorporating battery into equipments

Encase battery in a well ventilated compartment.

Avoid installing battery near heated units such as a transformer.

House the battery in the lowest section of the equipment enclosure or rack to prevent unnecessary battery temperature rise.

Others

Avoid terminal short circuit.

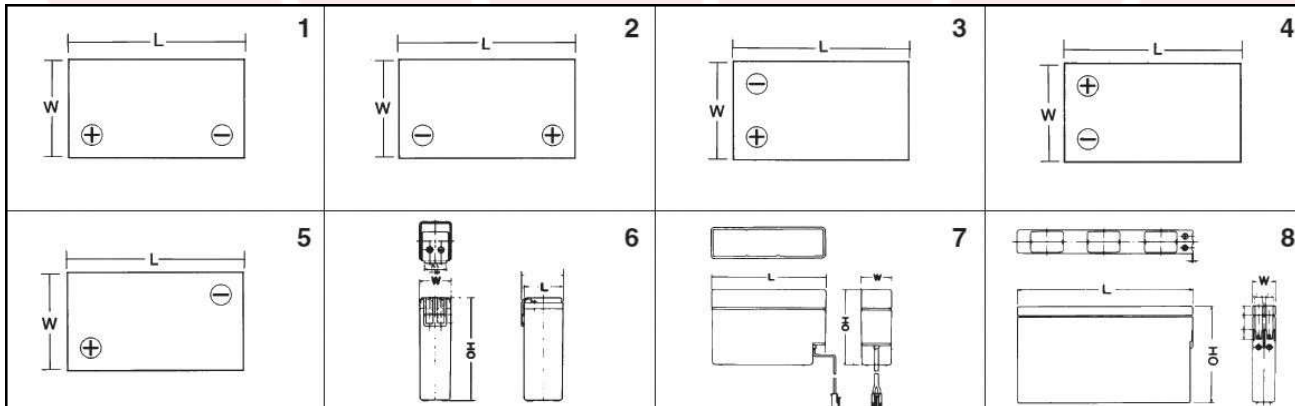
DO NOT expose to open flame.

Avoid setting batteries in environments which can cause direct contact to gasoline, paint thinner, organic solvents, synthetic resins, oil, etc...

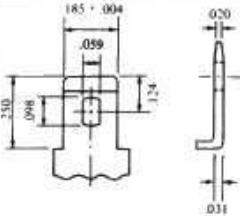
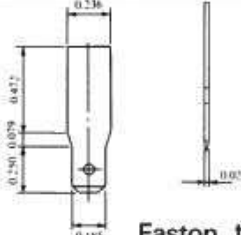
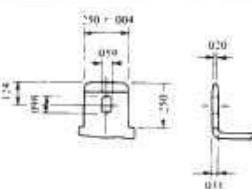
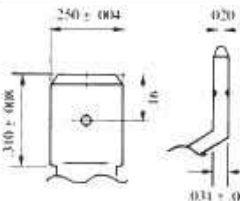
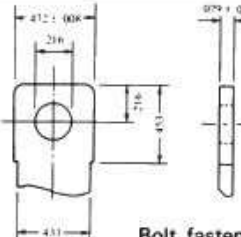
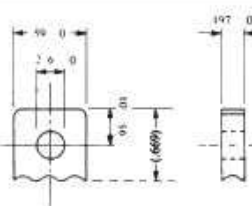
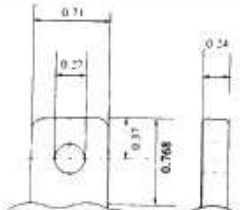
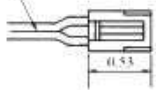
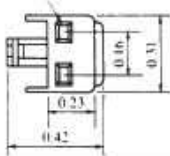
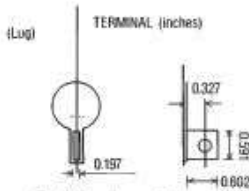

Limited Warranty:

Each Yuasa NP Series battery which is sold is warranted against defects in workmanship and materials for a period of one year from the date of manufacture. Under this warranty, our obligation will be limited to the repair or replacement of the battery. Such repair or replacement will be FOB our warehouse. Such repair or replacement will be made only after our examination determines defective in material and/or workmanship. We exempt from any warranty claims any battery which has been subjected to misuse, abuse, alteration, or any battery that may have been repaired or attempts made for repair by other than Yuasa, Inc. **THIS WARRANTY MADE IN LIEU OF ALL OTHER WARRANTIES WITH RESPECT TO THE PRODUCT COVERED HEREBY AND THERE ARE NO OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, OR MERCHANTABILITY OR OTHERWISE EXCEPT THE WARRANTY EXPRESSLY STATED HEREIN. THE REMEDY SET FORTH HEREIN SHALL BE THE SOLE EXCLUSIVE REMEDY OF ANY PURCHASER WITH RESPECT TO ANY DEFECTIVE PRODUCT, UNDER NO CIRCUMSTANCES SHALL WE BE LIABLE FOR ANY INJURY, LOSS, DAMAGE, OR EXPENSE SUFFERED OR INCURRED WITH RESPECT TO ANY DEFECTIVE PRODUCT.**

Layout



Terminals

 <p>185 ± .004 0.059 230 0.098 124 0.020 0.031</p>	<p>INCH = MM</p> <table><tr><td>.250</td><td>6.35</td></tr><tr><td>.185</td><td>4.70</td></tr><tr><td>.124</td><td>3.15</td></tr><tr><td>.098</td><td>2.50</td></tr><tr><td>.059</td><td>1.50</td></tr><tr><td>.031</td><td>0.80</td></tr><tr><td>.020</td><td>0.50</td></tr><tr><td>.004</td><td>0.10</td></tr></table>	.250	6.35	.185	4.70	.124	3.15	.098	2.50	.059	1.50	.031	0.80	.020	0.50	.004	0.10
.250	6.35																
.185	4.70																
.124	3.15																
.098	2.50																
.059	1.50																
.031	0.80																
.020	0.50																
.004	0.10																
<p>Faston tab : 187 A</p>	 <p>0.236 0.472 0.1250 0.0079 0.185 0.070</p> <p>INCH = MM</p> <table><tr><td>0.472</td><td>12.00</td></tr><tr><td>0.250</td><td>6.35</td></tr><tr><td>0.236</td><td>6.00</td></tr><tr><td>0.185</td><td>4.70</td></tr><tr><td>0.079</td><td>2.00</td></tr><tr><td>0.020</td><td>0.50</td></tr></table>	0.472	12.00	0.250	6.35	0.236	6.00	0.185	4.70	0.079	2.00	0.020	0.50				
0.472	12.00																
0.250	6.35																
0.236	6.00																
0.185	4.70																
0.079	2.00																
0.020	0.50																
<p>Faston tab: 187 B</p>	 <p>50 ± .004 0.050 124 0.098 0.020 0.011</p> <p>INCH = MM</p> <table><tr><td>.250</td><td>6.35</td></tr><tr><td>.124</td><td>3.15</td></tr><tr><td>.098</td><td>2.50</td></tr><tr><td>.059</td><td>1.50</td></tr><tr><td>.031</td><td>0.80</td></tr><tr><td>.020</td><td>0.50</td></tr></table>	.250	6.35	.124	3.15	.098	2.50	.059	1.50	.031	0.80	.020	0.50				
.250	6.35																
.124	3.15																
.098	2.50																
.059	1.50																
.031	0.80																
.020	0.50																
<p>Faston tab :250 C</p>	 <p>250 ± .004 0.020 310 ± .008 16 0.31 ± .004</p> <p>INCH = MM</p> <table><tr><td>.310</td><td>7.90</td></tr><tr><td>.250</td><td>6.35</td></tr><tr><td>.16</td><td>4.0</td></tr><tr><td>.031</td><td>0.8</td></tr><tr><td>.020</td><td>0.5</td></tr></table>	.310	7.90	.250	6.35	.16	4.0	.031	0.8	.020	0.5						
.310	7.90																
.250	6.35																
.16	4.0																
.031	0.8																
.020	0.5																
<p>Faston tab 250 D</p>	 <p>472 ± .008 216 216 433 433</p> <p>INCH = MM</p> <table><tr><td>.472</td><td>12.00</td></tr><tr><td>.453</td><td>11.50</td></tr><tr><td>.433</td><td>11.00</td></tr><tr><td>.216</td><td>5.50</td></tr><tr><td>.079</td><td>2.00</td></tr></table>	.472	12.00	.453	11.50	.433	11.00	.216	5.50	.079	2.00						
.472	12.00																
.453	11.50																
.433	11.00																
.216	5.50																
.079	2.00																
<p>Bolt fastened terminal E</p>	 <p>59 ± 0 26 ± 0 95 ± 0 669 197 ± 01</p> <p>INCH = MM</p> <table><tr><td>.669</td><td>17.0</td></tr><tr><td>.216</td><td>5.5</td></tr><tr><td>.295</td><td>7.5</td></tr><tr><td>.197</td><td>5.0</td></tr></table>	.669	17.0	.216	5.5	.295	7.5	.197	5.0								
.669	17.0																
.216	5.5																
.295	7.5																
.197	5.0																
<p>Bolt fastened terminal F</p>	 <p>0.71 0.27 0.37 0.71 0.768 0.37 0.54</p> <p>INCH = MM</p> <table><tr><td>0.24</td><td>6</td></tr><tr><td>0.27</td><td>7</td></tr><tr><td>0.37</td><td>9.5</td></tr><tr><td>0.71</td><td>18</td></tr><tr><td>0.768</td><td>19.5</td></tr></table>	0.24	6	0.27	7	0.37	9.5	0.71	18	0.768	19.5						
0.24	6																
0.27	7																
0.37	9.5																
0.71	18																
0.768	19.5																
<p>Bolt fastened terminal G</p>	<p>WIRE AWG #20 UL 1007</p>  <p>0.53</p> <p>JST No. VHR-2N I</p> <p>JST VHR-2N (TERMINAL)</p> <p>JST SVH-21T-P1.1</p>  <p>0.42 0.23 0.46 0.31</p>																
<p>Bolt fastened terminal J</p>	 <p>(Lug)</p> <p>TERMINAL (inches)</p> <p>0.327 0.602 0.197</p>																
 <p>UNF#10-32</p> <p>Threaded Receptacle K</p>																	