

Accutronics Guide to Inspired Energy Lithium Ion Standard Smart Battery Part Numbers

Inspired Energy Lithium Ion Standard Smart Battery part numbers consist of six characters which form the generic model and then an additional 3 or 4 characters which identify the specific model:

Six Characters (Nx20nn)

- The first character is a generic letter and is always "N".
- The second character is a letter and shows the number of individual cells in the battery "B=2"... "L-12".
- The third and fourth characters are generic numbers and are always "20" for Inspired Energy Lithium Ion standard smart batteries.
- The fifth character is a number and refers to the mechanical arrangement of the cells within the battery case "2", "3", "4", "5" or "6". Refer to our Inspired Energy Mechanical Overview for more information.
- The sixth character is a number and refers to the nominal battery voltage. "3" = 3.6V (one cell in series), "7" = 7.2V (two cells in series), "0" = 10.8V (three cells in series) and "4" = 14.4V (four cells in series). Note that the number of cells in the battery divided by the number of cells in series gives the number of cells in parallel within the battery (which dictates the capacity).

Additional 3 or 4 Characters (xnn or xxnn)

- The next single or pair of characters are letters and they refer to the relative discharge rate of the battery and its external agency approval ("A" = Standard discharge with no external agency approval, "XL" = Standard discharge + Listed to UL2054, "XD" = High discharge + Recognised to UL2054, "ED" = Extreme discharge with no external agency approval, "HD" = High discharge with no external agency approval, "XE" = Extreme discharge + Recognised to UL2054 and "XR" = Standard discharge + Recognised to UL2054).
- The last two digits refer to the capacity of the cells used in the battery in mAh/100. Example "29" = cells of 2900mAh.

Examples:

NF2040XD24 = 10.8V, Six x 2400mAh cells. High discharge + Recognised to UL2054. As the battery voltage is 10.8V and each cell has a nominal voltage of 3.6V then there are $10.8V/3.6V = 3$ cells in series. As there are 6 cells in the battery and 3 cells in series then there are $6/3=2$ cells in parallel. The battery capacity is therefore $2 \times 2400mAh = 4800mAh$.

NL2024HD22 = 14.4V, Twelve x 2200mAh cells. High discharge, no external agency approval. As the battery voltage is 14.4V and each cell has a nominal voltage of 3.6V then there are $14.4V/3.6V = 4$ cells in series. As there are 12 cells in the battery and 4 cells in series then there are $12/4=3$ cells in parallel. The battery capacity is therefore $3 \times 2200mAh = 6600mAh$.