



# SPECIFICATIONS

Heavy Duty Lithium-ion Cell

**NMC18650-21HD**

## Features

- Ultra High Specific Power
- High Specific Energy
- Ultra Long Cycle Life\*\*
- High Reliability
- High Safety
- Aviation & Space Class
- Military & Medical Class

## Applications

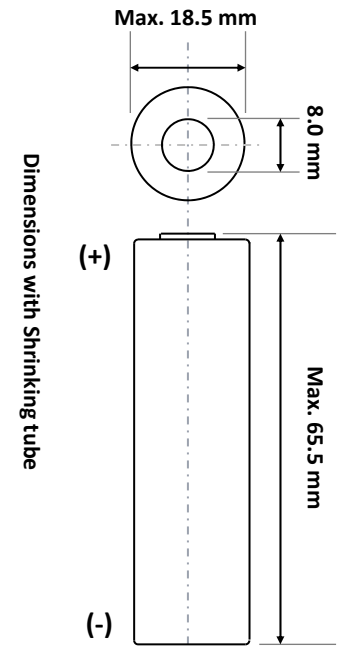
- Space Flight Li-ion Battery
- Aviation Main & APU Battery
- Military Robotic Fighter
- Military Four legged Robot
- Heavy Duty Tactical Robot
- Robotic Fire Fighter
- Portable Motorized Medical Equipment
- Wide Dynamic Range Energy Storage System

## Specifications\*

<b>Nominal Capacity</b>	Discharge at 25 °C	2.0 Ah (Minimum)
	at 25 °C, 2.1 A	2.1 Ah (Typical)
	at 25 °C, 25 A	2.4 Ah (typical)
<b>Lifetime Capacity</b>	at 25 °C, 30 A	2.3 Ah (Typical)
	Watch chart below	2,490 Ah (Typical)**
<b>Nominal Voltage</b>	Discharge average	3.7 V
<b>Charging</b>	CC-CV, 4.2 V,	1.0 A (Standard)
	42 mA cut-off	4.0 A (Rapid)
<b>Discharging</b>	2.5 V cut-off	30 A (Max. Cont.)
<b>Battery Body Temperature</b>	Charge	0 ~ 45 °C
	Discharge	-20 ~ 60 °C
	Storage	-20 ~ 45 °C
<b>Weight</b>	Average	42.6 g ± 5%

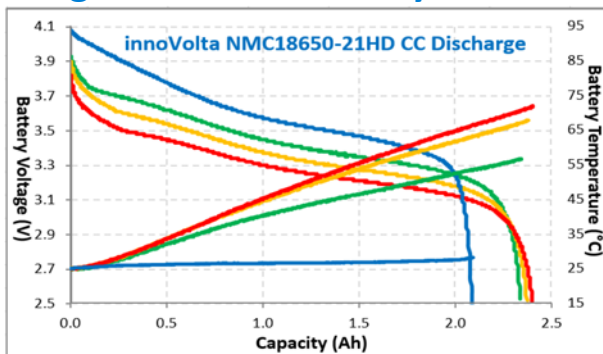
\* All test data are averaging with 5 samples obtained from 3 month inventory.  
 \*\* 1,420 Ah capacity is typically delivered as a power cell; another 1,070 Ah can still be exploited as an energy cell.

## Dimensions



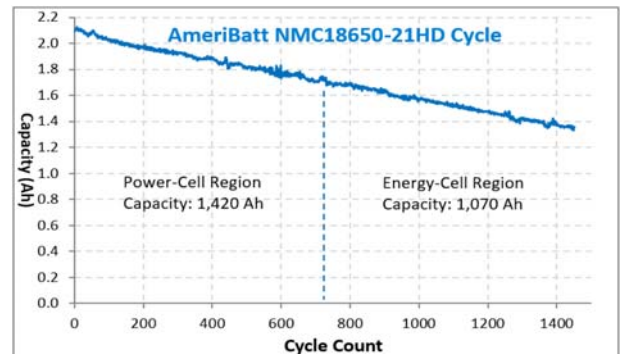
For reference only

## Discharge Characteristics by Current



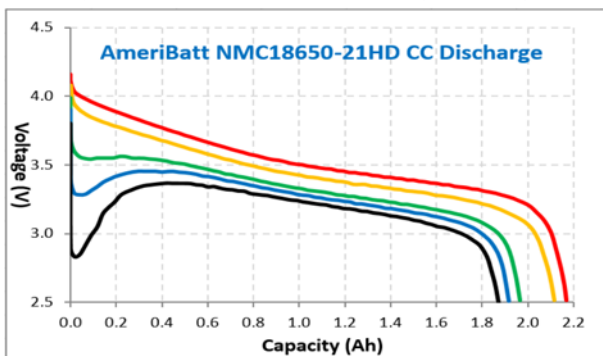
Charge: CC/CV, 1 A / 4.20 V 42 mA cut-off, Ta = 25 °C  
 Discharge: CC 1C / 15A / 20A / 25A, 2.50 V cut-off, Ta = 25 °C

## Cycle Life Characteristics



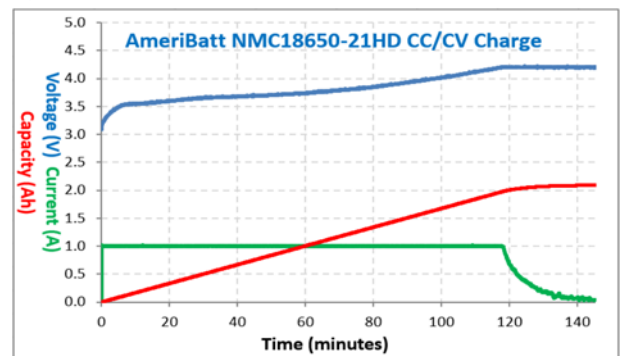
Charge: CC/CV, 1 A / 4.20 V 42 mA cut-off, Ta = 25 °C  
 Discharge: CC 20A, 2.50 V cut-off, Ta = 25 °C

## Discharge Characteristics by Temperature



Charge: CC/CV, 1 A / 4.20 V 42 mA cut-off, Ta = 25 °C  
 Discharge: CC 10 A, 2.50 V cut-off, Ta = 60, 25, 0, -10, -20 °C

## Charge Characteristics



Charge: CC/CV, 1 A / 4.20 V 42 mA cut-off, Ta = 25 °C

The data in this document is for descriptive purposes only and are not intended to make or imply any guarantee or warranty.

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