



## HE341440 NCA

Lithium Ion Cell - High Energy

3.6 V / 10 Ah / 36 Wh

### Physical and Mechanical Characteristics

Diameter	34 mm
Length	174 mm (144 mm without terminals)
Weight	0.32 kg
Volume	0.13 l
Material	Stainless steel housing Positive terminal: Al M8 length: 10 mm Negative terminal: Cu M8 length: 10 mm

### Chemical Characteristics

Cathode	Lithium Nickel Cobalt Aluminium Oxide (NCA)
Anode	Graphite

### Electrical Characteristics

Reference Temperature 23°C +/- 3°C

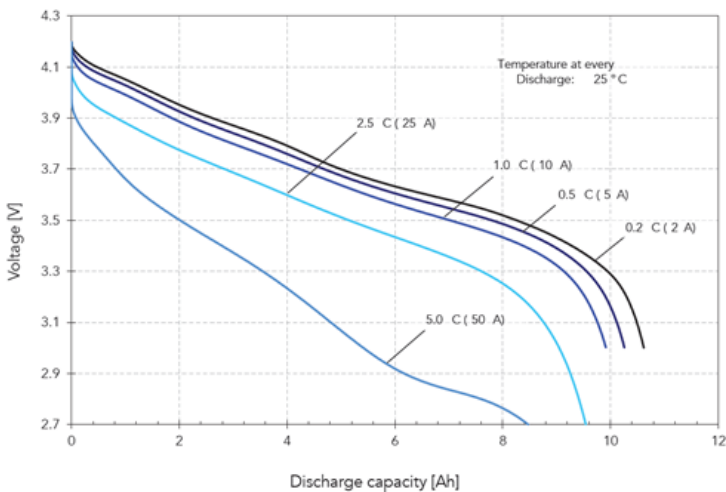
Nominal operating voltage	3.6 V
Nominal capacity at 0.2 C	10 Ah
AC Impedance (1 kHz)	≤ 2 mOhm
DC Resistance (ESR) 2s pulse discharge @ 20°C / 50% SOC	≤ 6.5 mOhm
Specific energy at 0.2 C	113 Wh/kg
Energy density at 0.2 C	275 Wh/l
Specific power 2s pulse discharge @ 50% SOC, 60C	2,000 W/kg
Power density 2s pulse discharge @ 50% SOC, 60C	4,910 W/l

## Operating Conditions

Reference Temperature 23°C +/- 3°C

Recommended charge method	Constant current / Constant voltage
End of charge	$I \leq C/100$
Maximum charge voltage	4.2 V
Recommended charge current	Up to 5 A (0.5 C)
Maximum continuous charge current	Up to 20 A (2 C)
Maximum pulse charge current (15 s) (Max SOC 70%, average current <88 A)	50 A (5 C)
Recommended voltage limit for discharge	3.0 V
Lower voltage limit for discharge	2.7 V (at high current or low temperature)
Lower voltage limit for pulse discharge	2.0 V
Recommended discharge current	Up to 10 A (1 C)
Maximum continuous discharge current	Up to 50 A (5 C)
Maximum pulse discharge current (2 s)	Up to 300 A (30 C)
Operating temperature	-30 °C to +60 °C
Recommended charge temperature	0 °C to +40 °C
Storage and transport temperature	-40 °C to +60 °C
Recommended storage	+10 °C to +25 °C, 30-50 % SOC
Cycle life at 20°C and 100% DoD, 0.5 C	> 1,000 cycles to 80 % of nominal capacity
Cycle life at 20°C and 80% DoD, 0.5 C	> 2,000 cycles to 80 % of nominal capacity

Voltage vs discharge capacity for various discharge currents



Voltage vs discharge capacity for various temperatures

