

# HP 602030 NCA

## 45 Ah/ 162 Wh

### Lithium Ion Cell



#### Physical and mechanical characteristics

Diameter	60 mm
Height	232 mm (203 mm without terminals)
Terminals	Positive terminal Al M12 L: 9 mm Negative terminal Cu M12 L: 9 mm
Weight	approx. 1500 g
Volume without terminals	0.57 l
Case material	Stainless Steel

#### Chemical characteristics

Positive electrode	Lithium nickel cobalt oxide
Negative electrode	Graphite

#### Electrical characteristics\*

Nominal voltage	3.6 V
Nominal capacity at 0.2 C	45 Ah
Minimum capacity	42 Ah
AC Impedance (1 kHz)	≤ 0.4 mOhm
DC Resistance (ESR) (2 s pulse discharge @ 20 C/ 50% SOC)	≤ 1.2 mOhm
Specific energy at 0.2 C	108 Wh/kg
Energy density at 0.2 C	282 Wh/l
Specific power (2 s pulse discharge @ 27.8 C/ 100% SOC)	2080 W/kg
Power density (2 s pulse discharge @ 27.8 C/ 100% SOC)	5440 W/l

#### Operating conditions\*

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 45 A (1 C)
Continuous charge current	up to 180 A (4 C)
Maximum pulse charge current (15 s) (Max. SOC 80 %, average current < 180 A)	270 A (6 C)
Recommended voltage limit for discharge	3 V
Lower voltage limit for discharge	2.7 V
Lower voltage limit for pulse discharge	2 V
Recommended discharge current	up to 90 A (2 C)
Maximum discharge current	up to 450 A (10 C)
Maximum pulse discharge current (2 s)	up to 1250 A (27.8 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
Cycle life at 20°C and 100% DOD (0.5 C charge; 0.5 C discharge)	> 1000 cycles to 80% nominal capacity > 2000 cycles to 60% nominal capacity

\* Reference temperature 20°C

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