



High Energy Product ●●●



+ Technology

Lithium Ion Polymer Battery
 $\text{Li}(\text{NiCoMn})\text{O}_2$ -based Cathode
 High Energy Density
 Optimized for PHEV, EV

+ Product General Specification

Mechanical Characteristics

Model	C020
Length	217.0 ± 1 mm [excluding terminal]
Width	130 ± 1 mm
Thickness	7.1 ± 0.2 mm
Weight	approx. 428 g

Electrical Characteristics

Nominal Voltage	3.65 V
Nominal Capacity	20 Ah
AC Impedance[1 KHz]	< 3m Ω
Specific Energy	174 Wh/Kg
Energy Density	370 Wh/L
Specific Power[DOD50%, 10sec]	2300 W/Kg
Power Density[DOD50%, 10sec]	4600 W/L

Operating Conditions

Charge Conditions

Recommended Charge Method	CC/CV
Maximum Charge Voltage	4.15 V
Recommended Charge Current	0.5 C Current

Discharge Conditions

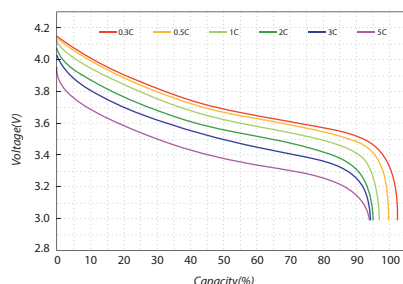
Recommended Voltage Limit for Discharge	3.0 V
Lower Voltage Limit for Discharge	2.5 V
Maximum Discharge Current[Continuous]	up to 5 C Current
Maximum Discharge Current[Peak < 10sec]	10 C Current

Operating Temperature	-30°C / +55°C
Recommended Charge Temperature	0°C / +40°C
Storage Temperature	-30°C / +55°C

Cycle Life at 25°C : (1 C Charge/ 1C Discharge, DOD100%)
 1000 Cycles to 80% Nominal Capacity

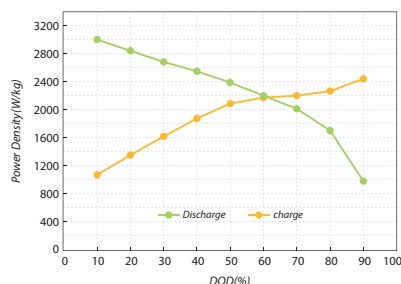
+ ePLB C020 Performance

Rate Capability



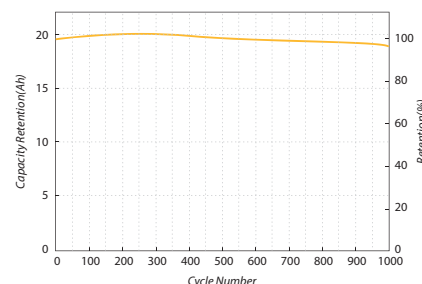
CHARGE : CC(0.5C)/CV(4.15V to 0.05C) at 25°C
 DISCHARGE : CC to 3.0V at 25°C

Pulse Power Characteristics



HPPC calculated from FreedomCAR Battery Test Manual

Cycle Life



CHARGE : CC(1.0C)/CV(4.15V to 0.05C) at 25°C
 DISCHARGE : CC(1.0C) to 3.0V at 25°C(DOD100%)