
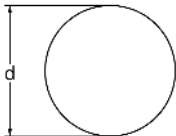



### Data Sheet – CP 1654 A2 (CoinPower®)<sup>1</sup>

	<b>Type Designation</b>	CP 1654 A2
	<b>Type Number</b>	63165
	<b>Cell Code</b>	ICR1654
	<b>System</b>	Graphite – layered metal oxide (LiNi <sub>x</sub> Mn <sub>y</sub> Co <sub>z</sub> O <sub>2</sub> )
	<b>UL Recognition</b>	MH13654
	<b>Nominal Voltage [V]</b>	3.7 (average)
	<b>Nominal Capacity C [mAh]</b>	100 (at 0.2C from 4.2 V to 3.0 V at 20 °C)
	<b>Dimensions [mm] (without Tags)</b>	
	<b>Diameter</b>	16.1 +0.0/-0.3
	<b>Height</b>	5.4 +0.2/-0.1
	<b>Weight. approx [g]</b>	3.2 +0.3/-0.3
	<b>Charging Method</b>	Constant Current + Constant Voltage
	<b>Charge Voltage [V]</b>	4.20 ± 0.05
	<b>Initial Charge Current [mA]</b>	Standard Charge: 0.5 C Rapid Charge: 1 C
	<b>Charging Cut-Off (a) or (b)</b>	
	<b>a) by time [h]</b>	Standard Charge: 5 Rapid Charge: 3
	<b>b) by min current [mA]</b>	0.02 C
	<b>Discharge Cut-Off Voltage [V]</b>	3.0
	<b>Max. Pulse Discharge Current [mA]</b>	3 C @ 2s
	<b>Max. Continuous Discharge Current [mA]</b>	2 C
	<b>Operating Temperature [°C]</b>	Charge: 0 to 45 Discharge: -20 to 60
	<b>Storage Temperature</b>	1 Year at -20 to 20 °C > 90
	<b>Capacity Recovery Rate<sup>2 3</sup> [%]</b>	3 Month at -20 to 45 °C > 90 1 Month at -20 to 60 °C > 85
	<b>Impedance Initial [Ω]</b>	< 0,4 @ 1kHz
	<b>Cycle Life 0.2C/0.2C, 20 °C<sup>3</sup> [Cycles]</b>	>500 (> 85 % of C <sub>ini</sub> )
	<b>Cycle Life 1C/1C, 20 °C<sup>3</sup> [Cycles]</b>	>500 (> 80 % of C <sub>ini</sub> )
	<b>Safety</b>	UN 38.3 passed relevant IEC 62133 tests passed
	<b>Internal Approval</b>	
	<b>Overcharge Test (12V, 3C, 12h)</b>	passed
	<b>Overcharge Test (5V, 1A, 12h)</b>	passed

<sup>1</sup> Recommendations regarding Charging/Discharging and Safety (cf. Handling Precautions/Advanced Product Information) have to be accepted. Cell must not be used without external safety electronics (PCM – Protection Circuit Module)! This product is protected by at least one of the following patents: US 6265100 B1, US 6066184 A, US 9178251 B2, US 9231281 B2, US 8586232 B2, US 9153835 B2, CN 102318122 B, CN 102804473 B, EP 2628203 B1, EP 2443691 B1, EP 2415101 B1, EP 2394324 B1, JP 5767115 B2, DE 19647593 B4.

<sup>2</sup> After storage at initial cell voltage of 3.6 to 3.7 V / cell

<sup>3</sup> typical values