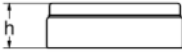
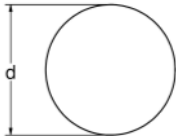



### Data Sheet – CP 1654 A3 (CoinPower®)<sup>1</sup>

	<b>Type Designation</b>	CP 1654 A3
	<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>Typical Capacity C [mAh]</b>	122 (at 0.2C from 4.2 V to 3.0 V at 20 °C)
	<b>Nominal Capacity C [mAh]</b>	120 (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>	3.0 +0.2/-0.2
	<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: 60 Fast Charge <sup>2</sup> : 120 Rapid Charge <sup>3</sup> : 240
	<b>Charging Cut-Off (a) or (b)</b>	
	<b>a) by time [h]</b>	Standard Charge: 5 Fast/Rapid Charge: 3
	<b>b) by min current [mA]</b>	2.4
	<b>Discharge Cut-Off Voltage [V]</b>	3.0
	<b>Max. Pulse Discharge Current [mA]</b>	360 @ 2s
	<b>Max. Continuous Discharge Current [mA]</b>	240
	<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>4</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 0.5C/0.5C, 20 °C<sup>5</sup> [Cycles]</b>	>500 (> 80% of C <sub>ini</sub> )
	<b>Safety</b>	UN 38.3 passed relevant tests acc. IEC 62133 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)! The CoinPower cell may exclusively be used for the intended purpose. For medical applications please contact VARTA Microbattery. This product is protected by at least one of the following patents: 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> "CoinPower A3-Version Charging Document" must be observed.

<sup>3</sup> "CoinPower A3-Version Charging Document" must be observed. Max. charging voltage: 4.00V ± 0.05V; min. charging temperature: 15°C.

<sup>4</sup> After storage at initial cell voltage of 3.6 to 3.7 V / cell

<sup>5</sup> typical values