

PARAMETERS	VALUES			UNITS	NOTES
	Min.	Typ.	Max.		

**CELL SPECIFICATIONS**

Company Name					Science Cadets, Inc.
Cell Description					Anode: Synthetic Graphite Cathode: NMC
Part Number					INR-18650-CE
Cell Shape					Cylindrical
Internal Construction					Spiral
Capacity	2100	2300	2400		mAh
Nominal Voltage		3.7			V Average voltage at 0.2C rate
Energy		7.9			Wh
Dimensions	Diameter	18.0	18.2	18.4	mm
	Length	64.3	64.8	65.3	mm
Weight		43.0	43.5	44.0	g
Energy	Specific Energy			204	Wh/kg
	Energy Density			527	Wh/l
Power	Specific Power			331	W/kg
	Power Density			1010	W/lit
AC Impedance		55	70		mΩ Initial; Measured at 1 kHz
Cycle Life		1000			≥ 80% of Initial Capacity; C/5 charge & discharge, RT
Self Discharge			1.0		%/month
Shelf Life	5				years
Internal Impedance			55		mOhm
STO Discharge Current		480			mOhm

**OPERATING SPECIFICATIONS**

Operating Voltage	2.75		4.2		V	Recommended
<b>Charge</b>						
Method	Constant current – Constant voltage					*Proprietary method if using our own BMS; increases lifetime by up to 40%
Termination	I ≤ 22mA					
Voltage	4.20 ± 0.05 V					Recommended
Current		1150	4600		mA	≤ 0.5C recommended
Time	1.5	2.5			h	Standard charge at 0.5C
Temperature	0		60		°C	
<b>Discharge</b>						
Method	Constant or Pulse: Current, Power or Resistance					
Termination Voltage	2.5	2.75			V	2.5V for T ≤ 0°C
Continuous Current			4600		mA	
Pulse Current			6000		mA	30 seconds maximum
Temperature	-30		60		°C	

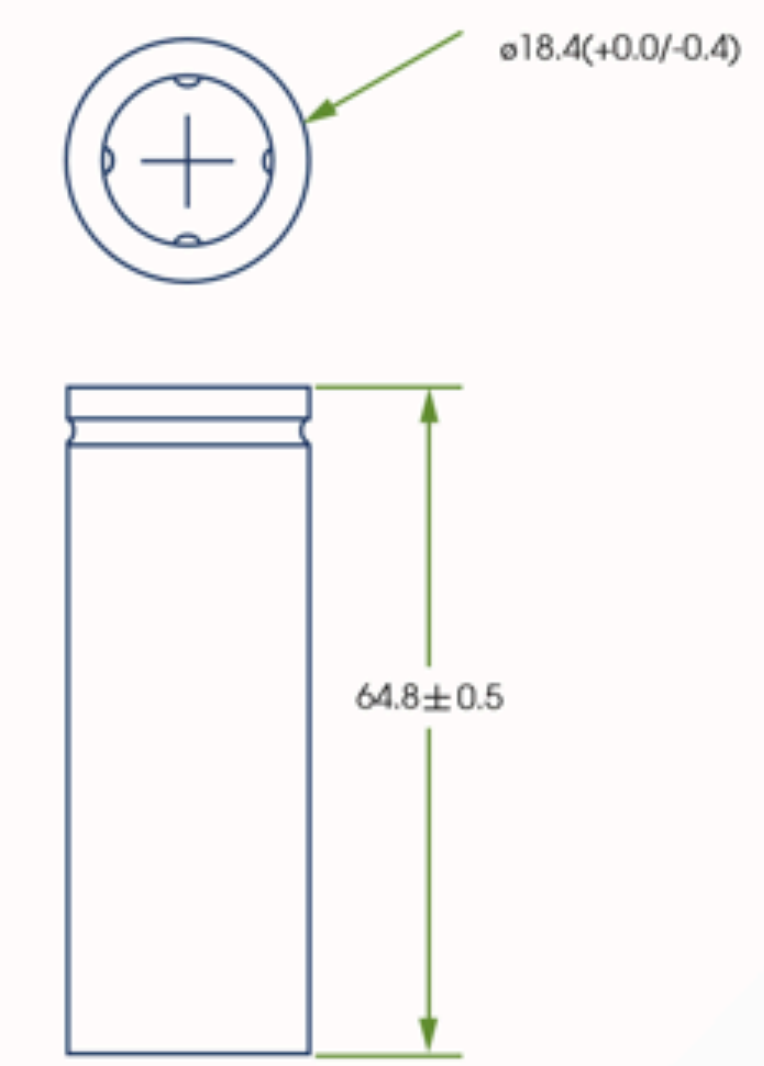
**STORAGE SPECIFICATIONS**

Temperature	Range	-30		60		°C
	Recommended	≤ 25				°C
Voltage	Range	3.3		4.2		V
State of Charge	Recommended	30		60		%
<b>Other</b>						
UL Testing	UL-1642					
UN Testing for shipping	Yes					
ROHS Compliant	Yes					

Pre-Production specifications. Performance may vary depending on usage conditions and application. Science Cadets makes no warranty explicit or implied with this datasheet. Contents subject to change without notice.

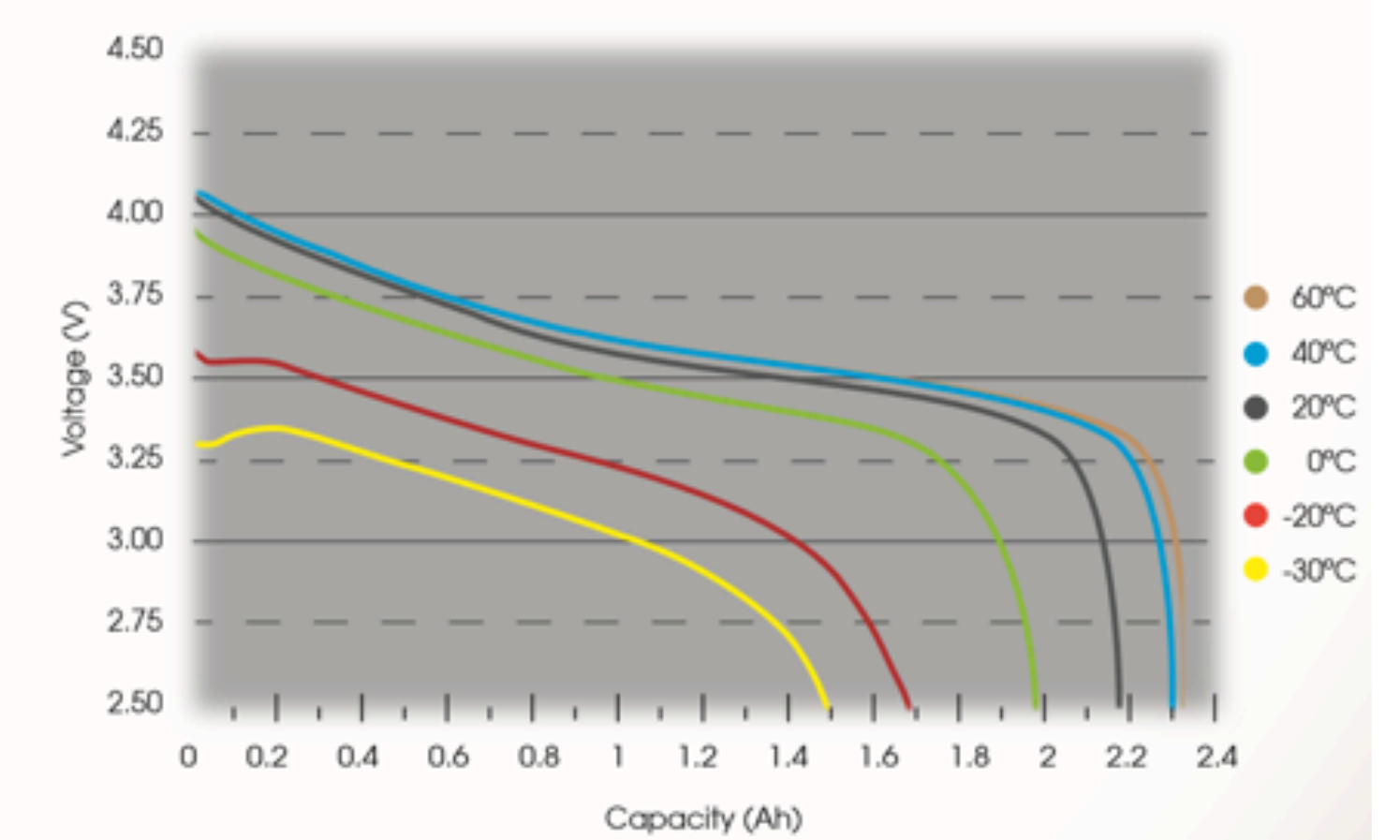
**EXTERNAL CELL DIMENSIONS**

\* Dimensions are in millimeter (mm)  
\*\* Drawing not to scale



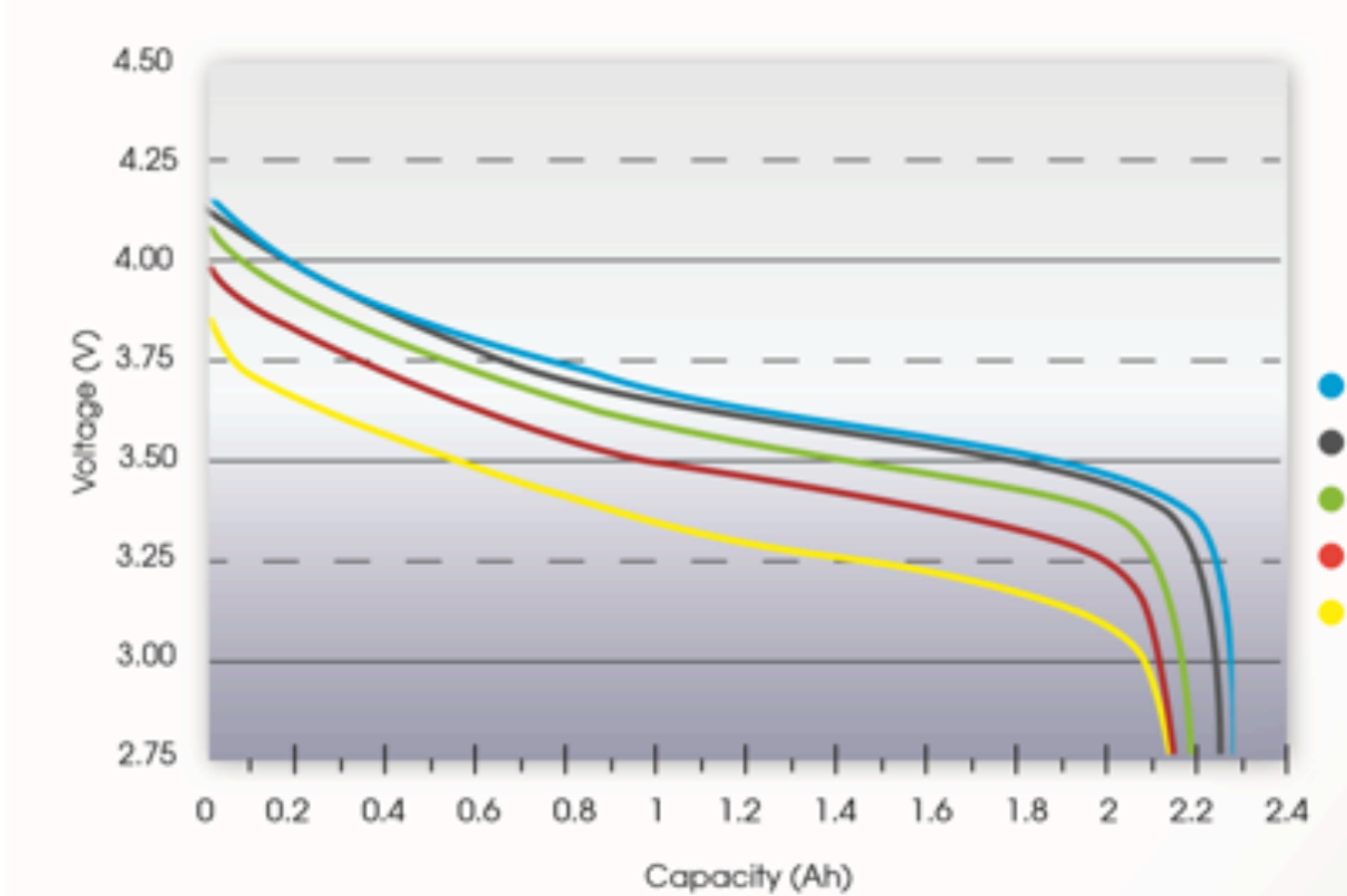
**TEMPERATURE DISCHARGE CURVES**

Conditions:  
Charge: 0.5C CC, 4.2V CV, cutoff C/20  
Charge temperature 20°C



**DISCHARGE CURVES**

Conditions:  
Temperature 20°C  
Charge: 0.5C CC, 4.2V CV, cutoff C/20



**CYCLE LIFE**

INR-18650-CE cycle life testing

