

Samsung INR18650-29E 2900mAh (Blue)



Official specifications:

- Nominal Capacity: 2,850mAh (0.2C, 2.50V discharge)
- Typical Capacity: 2,850mAh (0.2C, 2.50V discharge)
- Minimum Capacity: 2,750mAh (0.2C, 2.50V discharge)
- Charging Voltage: 4.20 ± 0.05 V
- Nominal Voltage: 3.65V (0.2C discharge)
- Charging Method: CC-CV (constant voltage with limited current)
- Charging Current: Standard charge: 1,375mA
- Charging Time: Standard charge: 3hours
- Max. Charge Current: 2750mA (not for cyclelife)
- Max. Discharge Current: 2,750mAh (continuous discharge), 8250mAh (not for continuous discharge)
- Discharge Cut-off Voltage: 2.50V
- Cell Weight (max. (g): 48g
- Cell Dimension: Diameter(max.) : 18.40 mm, Height(max) : 65.00 mm,
- Operating Temperature: (Cell Surface Temperature) Charge: 0 to 45°C, Discharge: -20 to 60°C
- Storage Temperature: 1 year : -20~25°C, 3 months : -20~45°C. 1 month : -20~60°C

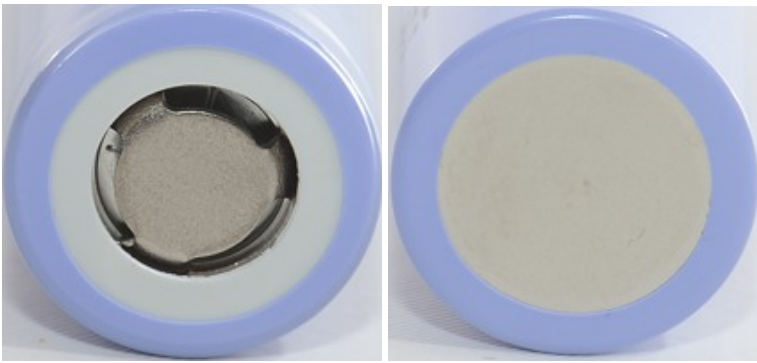
Name	Samsung INR18650-29E 2900mAh (Blue)					
Cell	Samsung INR18650-29E 2900mAh					
Supplier	nkon			Date:	2-2014	
Size	Weight:	45.0 g	Length:	64.9 mm	Diameter:	18.3 mm
Info	Top:	flat	Bottom:	metal	Rated A:	2.7
Test condition	Charge voltage:		4.2	Termination current:		
Test current (A)	0,2	0,5	1	2	3	5
Measured capacity (Ah)	2,899	2,813	2,738	2,685	2,675	2,686
Measured energy (Wh)	10,609	10,266	9,925	9,584	9,405	9,164
PCB protection trip current (A)	NA					
Calculated internal resistance (ohm)	0,06					

This cell has a rather low maximum current, to get the maximum life of the battery, but it is possible to draw high current peaks.

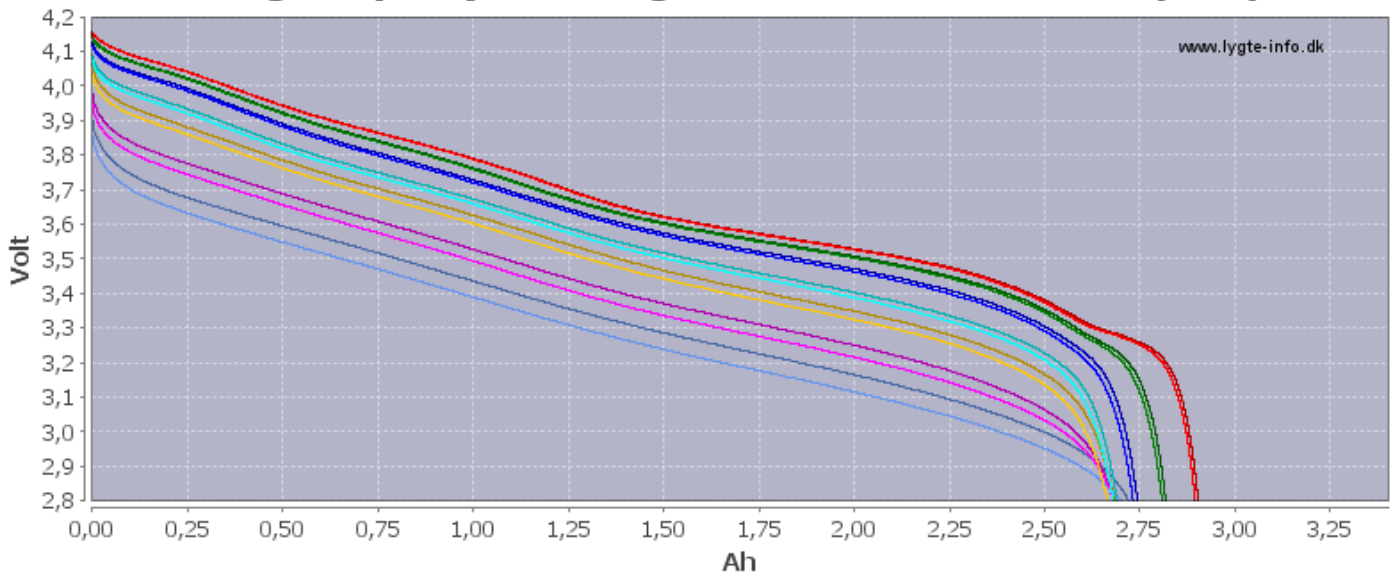


The cell capacity does change with load, except when the cell gets warm.

The cell has same type of discharge curves as other high capacity cells, i.e. the voltage drops all the time, it does not have a plateau.

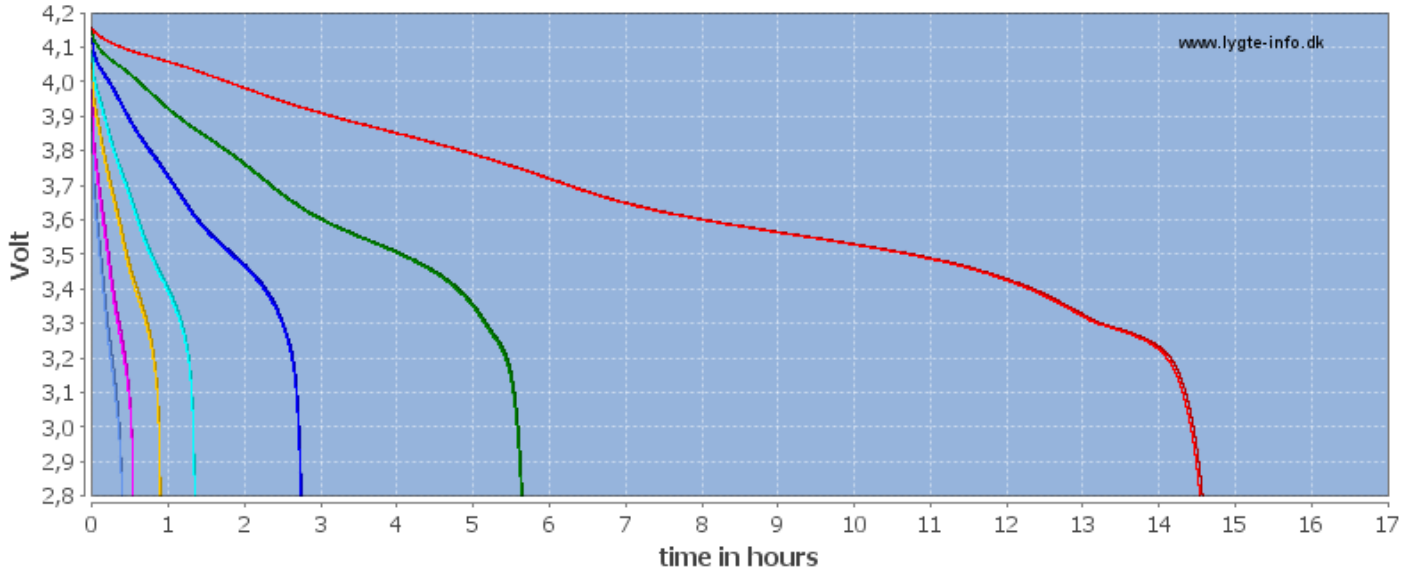


Discharge, capacity: Samsung INR18650-29E 2900mAh (Blue)



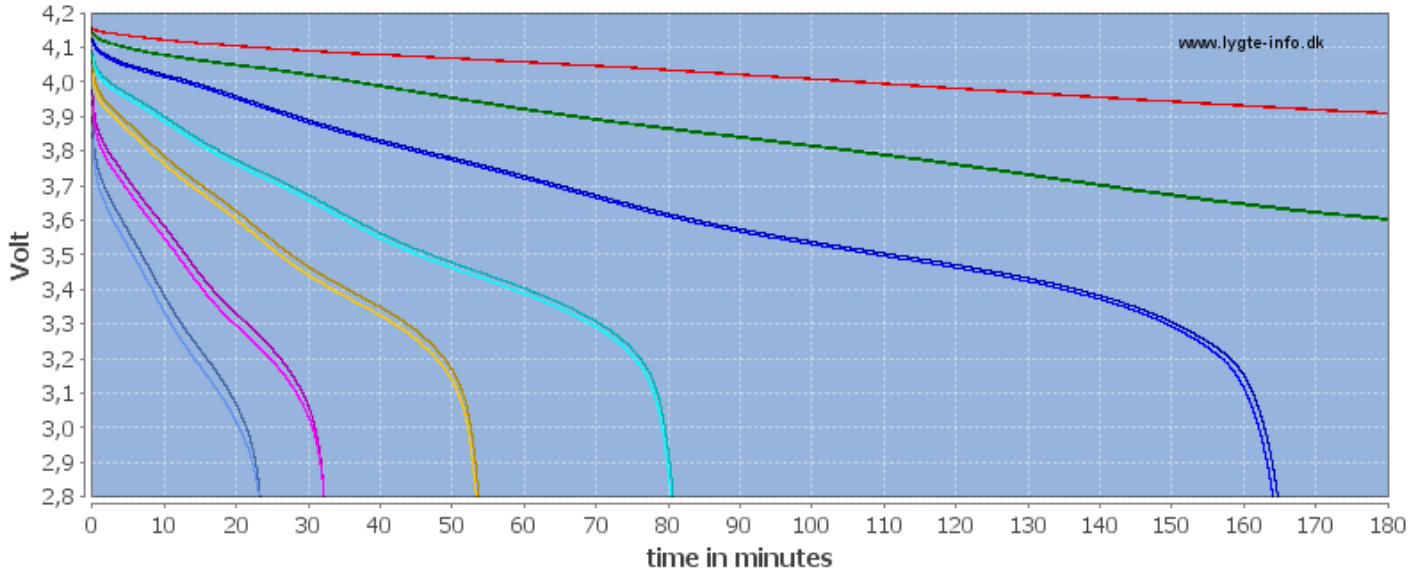
— A:0.2A	— B:0.2A	— A:0.5A	— B:0.5A	— A:1.0A	— B:1.0A	— A:2.0A	— B:2.0A	— A:3.0A	— B:3.0A	— A:5.0A	— B:5.0A
— A:7.0A	— B:7.0A										

Discharge, time: Samsung INR18650-29E 2900mAh (Blue)



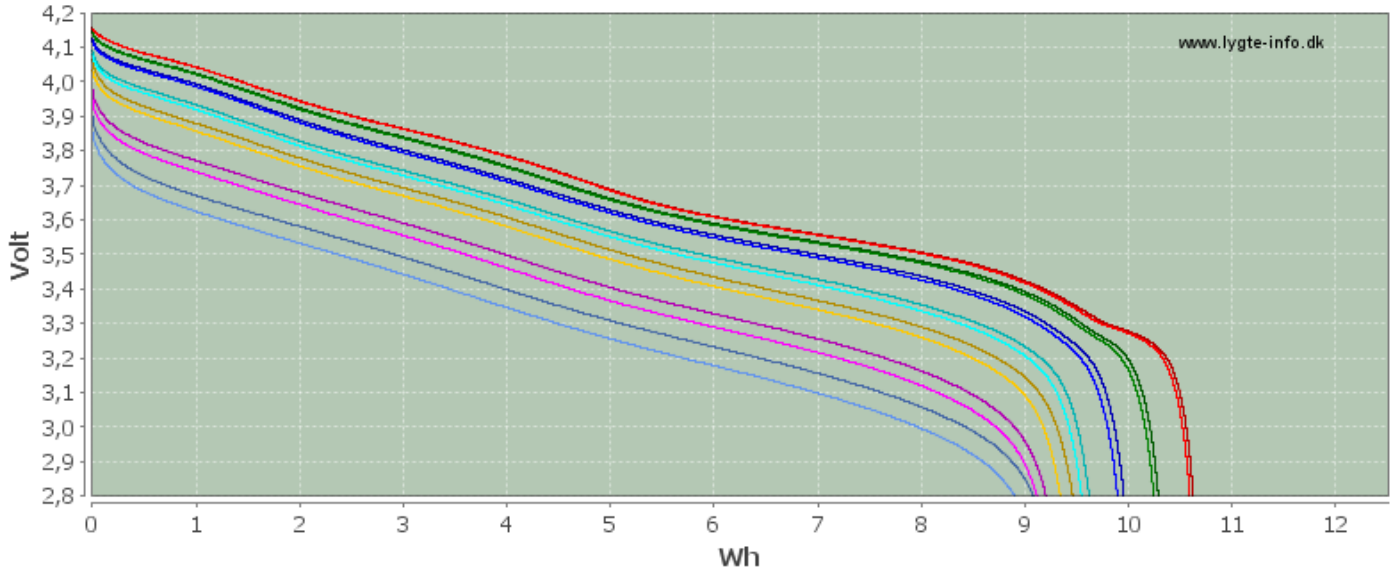
- A:0.2A B:0.2A A:0.5A B:0.5A A:1.0A B:1.0A A:2.0A B:2.0A A:3.0A B:3.0A A:5.0A B:5.0A
- A:7.0A B:7.0A

Discharge, time: Samsung INR18650-29E 2900mAh (Blue)



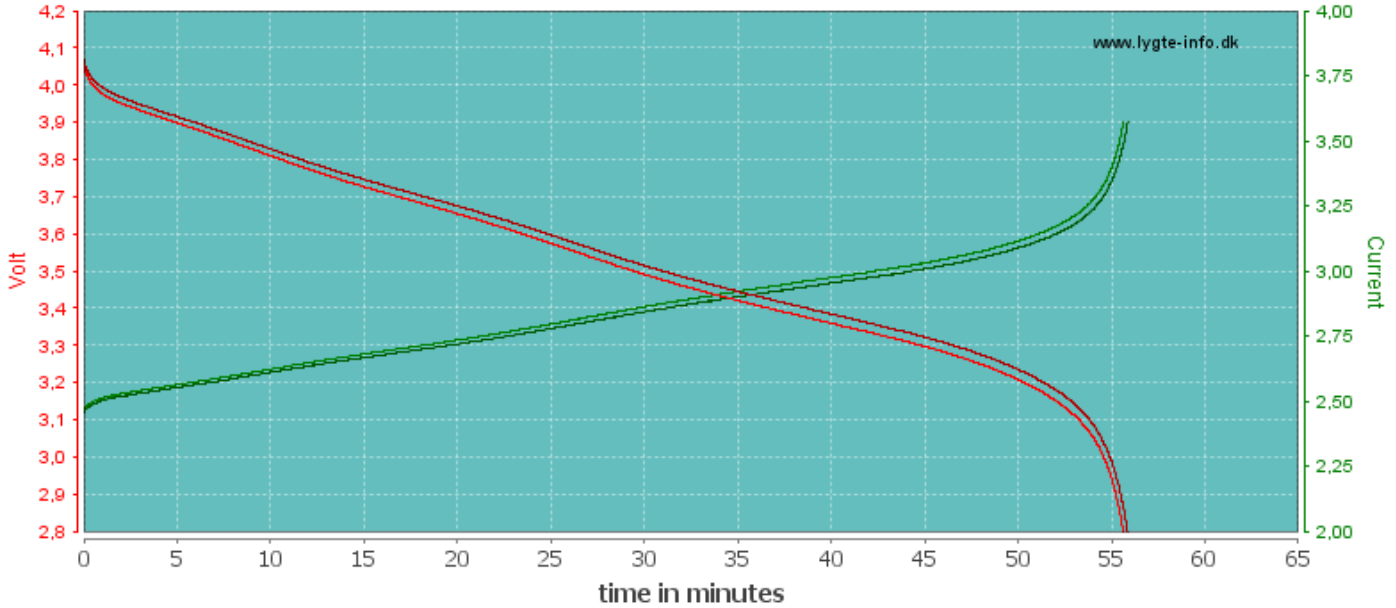
- A:0.2A B:0.2A A:0.5A B:0.5A A:1.0A B:1.0A A:2.0A B:2.0A A:3.0A B:3.0A A:5.0A B:5.0A
- A:7.0A B:7.0A

Discharge, energy: Samsung INR18650-29E 2900mAh (Blue)



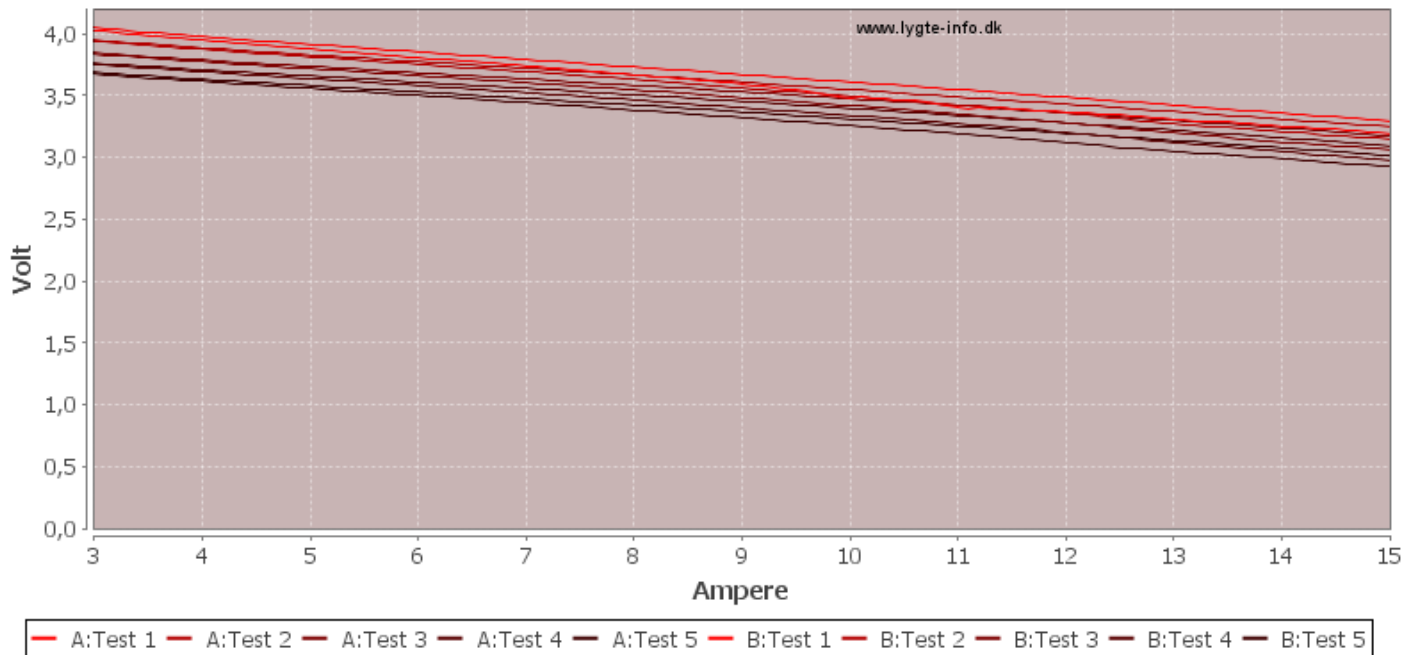
- A:0.2A B:0.2A A:0.5A B:0.5A A:1.0A B:1.0A A:2.0A B:2.0A A:3.0A B:3.0A A:5.0A B:5.0A
- A:7.0A B:7.0A

Discharge, power: Samsung INR18650-29E 2900mAh (Blue)



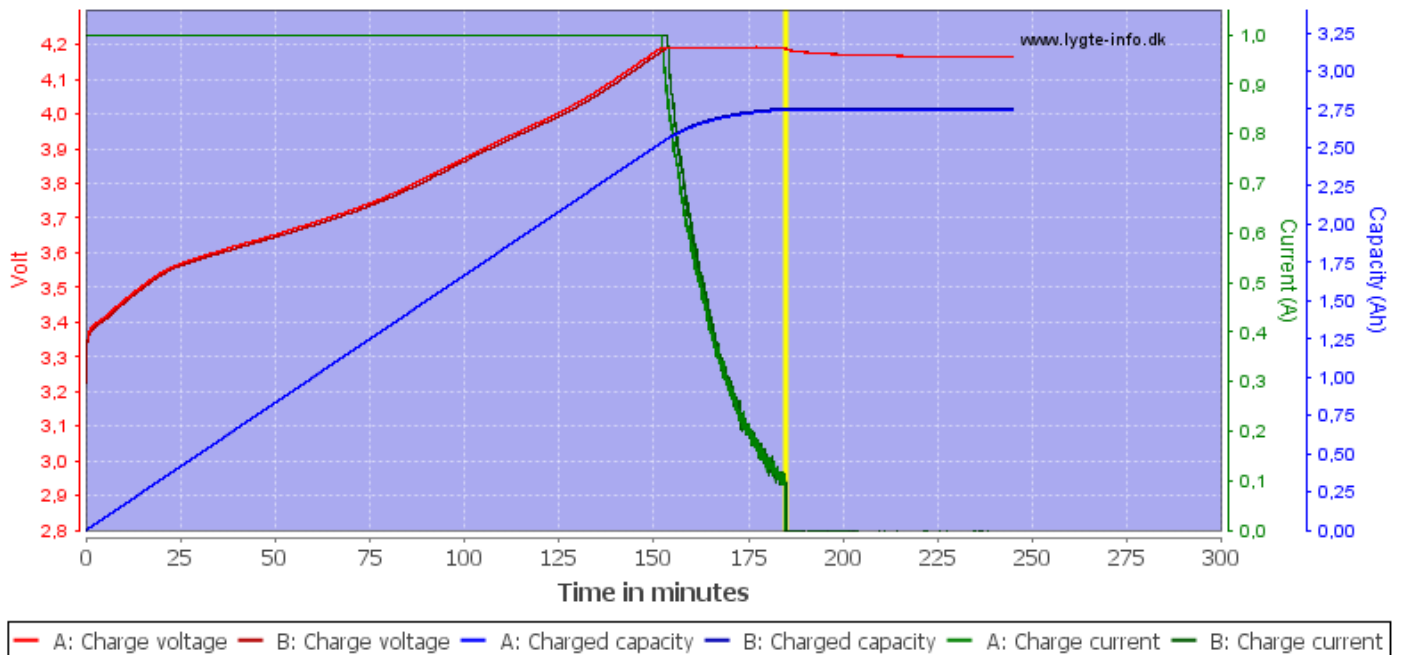
- A:10.0W voltage B:10.0W voltage A:10.0W current B:10.0W current

Protection test: Samsung INR18650-29E 2900mAh (Blue)



The cell is not rated for high current, but it can deliver, at least for a short time.

Charging: Samsung INR18650-29E 2900mAh (Blue)



Conclusion

Being Samsung it is a very good cell, performance is good, but not anything special.

Notes and links

[How is the test done and how to read the charts](#)
[How is a protected LiIon battery constructed](#)
[More about button top and flat top batteries](#)