

Samsung INR18650-30Q 3000mAh (Pink)



Official specifications:

- Initial IR (1kHz): <18mOhm
- Initial IR (DC): <30mOhm
- Charge method: CC-CV (4.2V+/-0.05V, 100mA cut-off)
- Standard charge current: 1.5A
- Fast charge current: 4A
- End voltage: 2.5V
- Max. continuous current: 15A
- Rated discharge capacity (0.2C): 3000mAh
- Rated discharge capacity (10A): 2700mAh
- Cycle life: 300 cycles to 70% (4A charge and 15A discharge)
- Cycle life: 250 cycles to 70% (4A charge and 22A discharge, pause at 70°C, resume at 50°C)

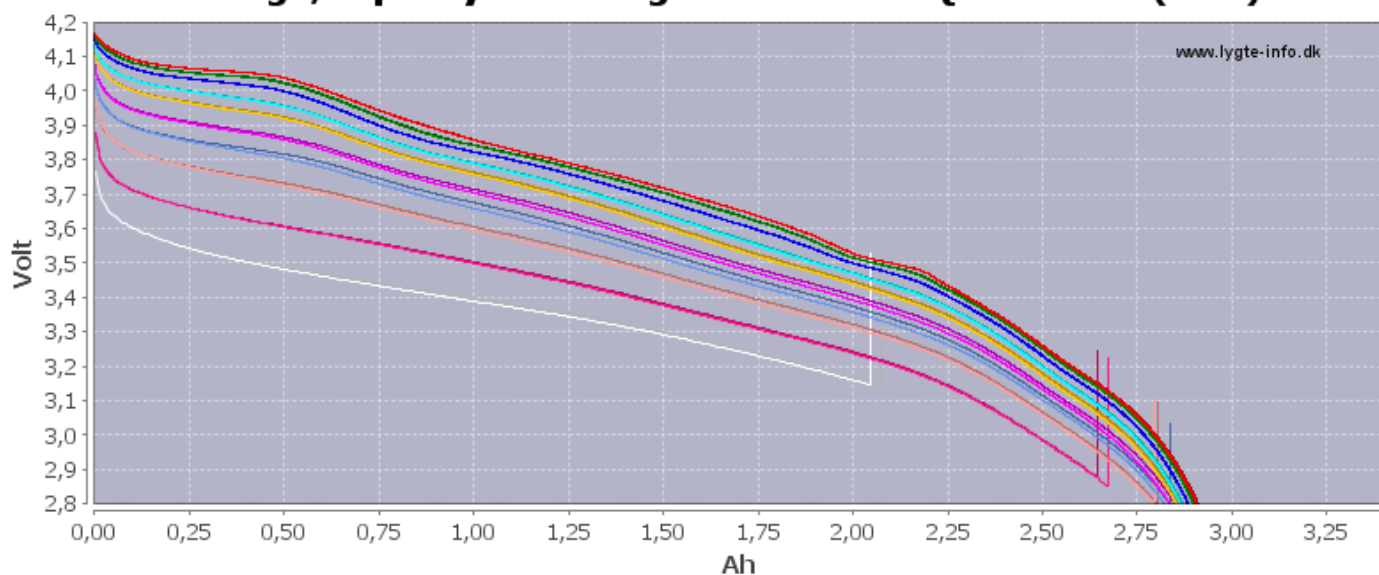
Name	Samsung INR18650-30Q 3000mAh (Pink)					
Cell	Samsung INR18650-30Q 3000mAh					
Supplier	fasttech				Date:	9-2015
Size	Weight:	45.9 g	Length:	64.9 mm	Diameter:	18.3 mm
Info	Top:	flat	Bottom:	metal	Rated A:	15
Test condition	Charge voltage:		4.2	Termination current:		0,1
Test current (A)	0,2	0,5	1	2	3	5
Measured capacity (Ah)	2,908	2,900	2,884	2,868	2,857	2,843
Measured energy (Wh)	10,679	10,621	10,517	10,366	10,255	10,079
PCB protection trip current (A)	NA					
Calculated internal resistance (ohm)	0,04					

Modern high current cells with lots of capacity.



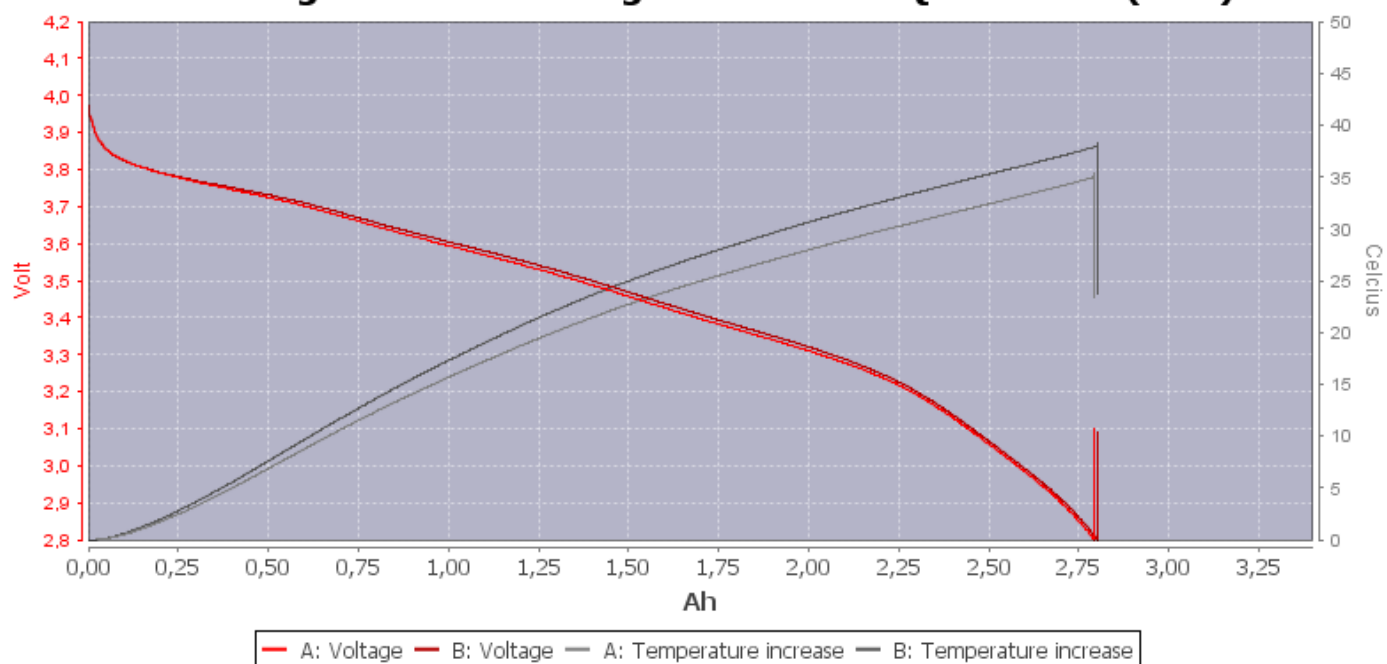


Discharge, capacity: Samsung INR18650-30Q 3000mAh (Pink)



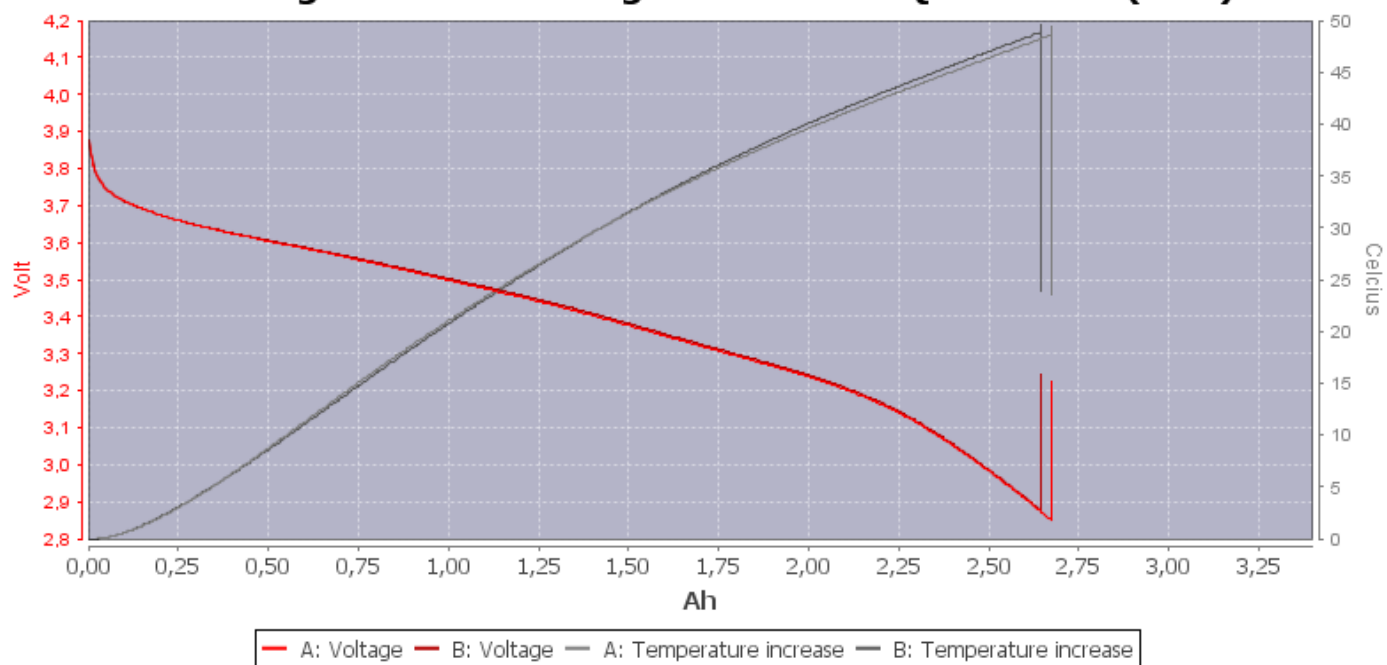
Very good discharge curves, capacity is nearly constant and they track perfectly. Even the 20A curve maintains a decent voltage, but as can be seen below the cell gets warm.
The tail on some curves is because I continue to record after stopping the discharge (If the cell is hot), i.e. it shows how much the voltage recovers.

Discharge 10.0A: Samsung INR18650-30Q 3000mAh (Pink)

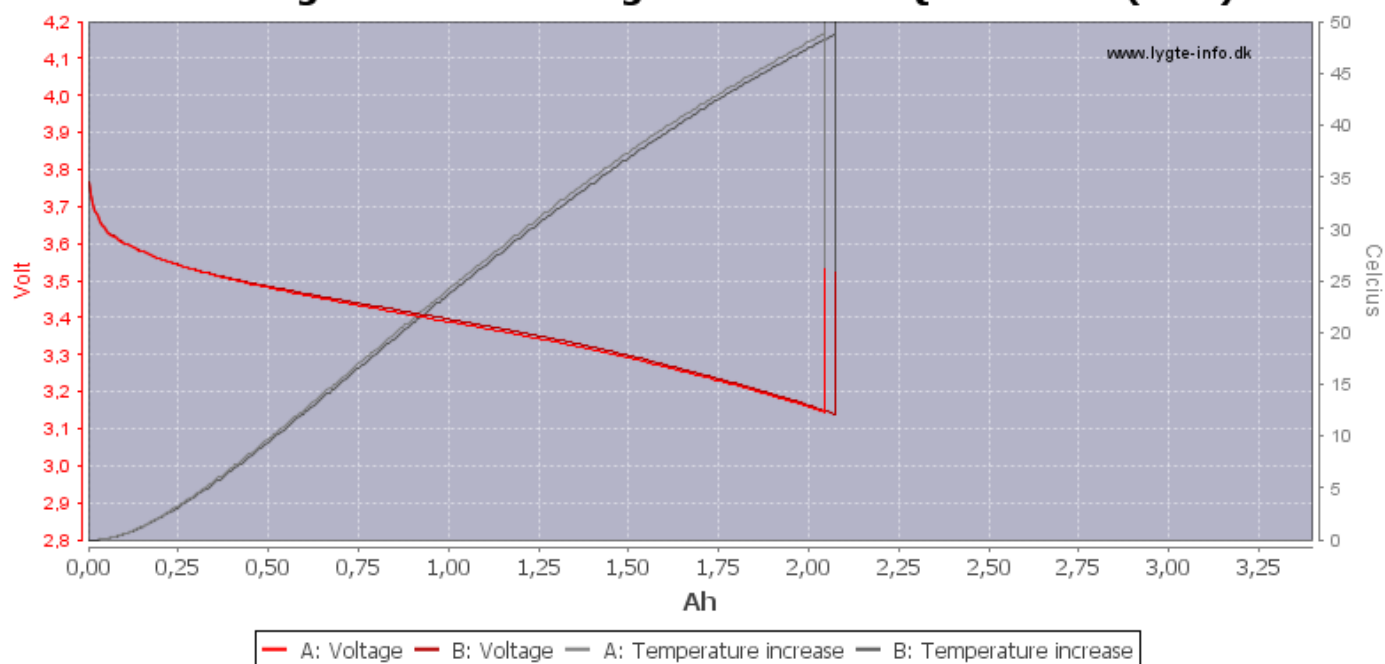


The cell will heat up at a 10A load, but it is rated for it.

Discharge 15.0A: Samsung INR18650-30Q 3000mAh (Pink)

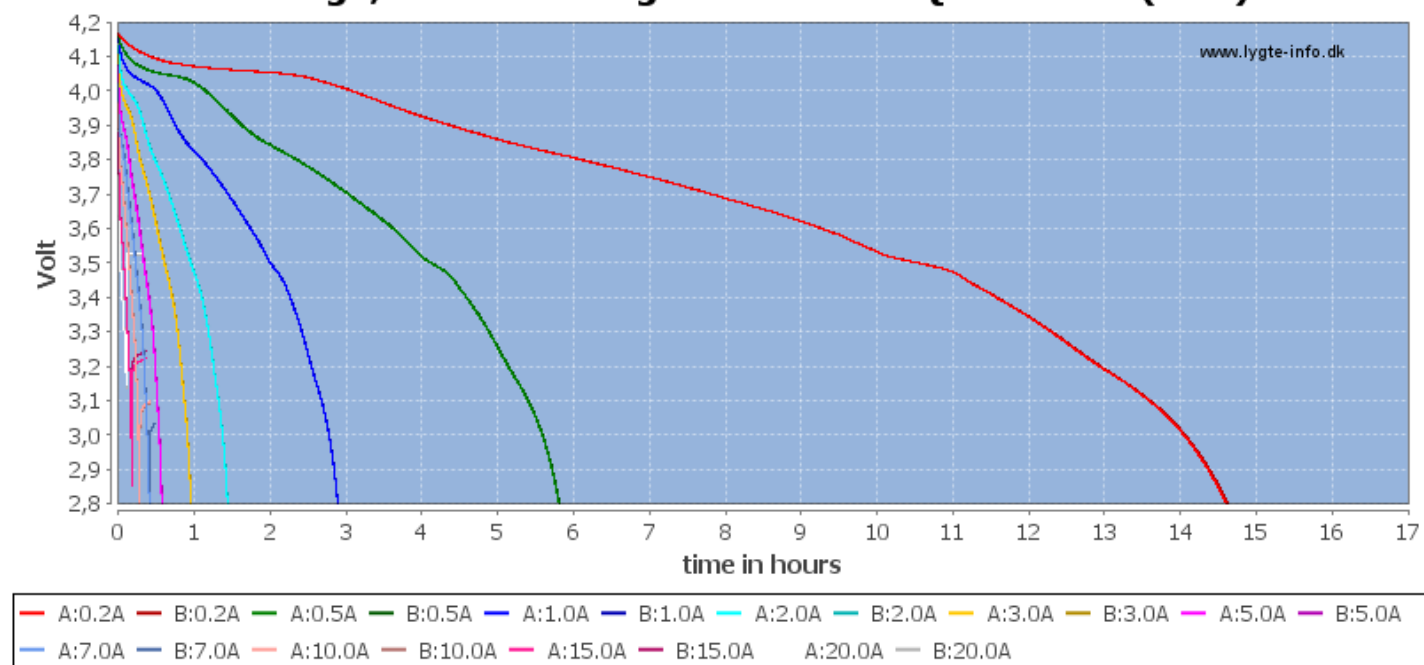


Discharge 20.0A: Samsung INR18650-30Q 3000mAh (Pink)

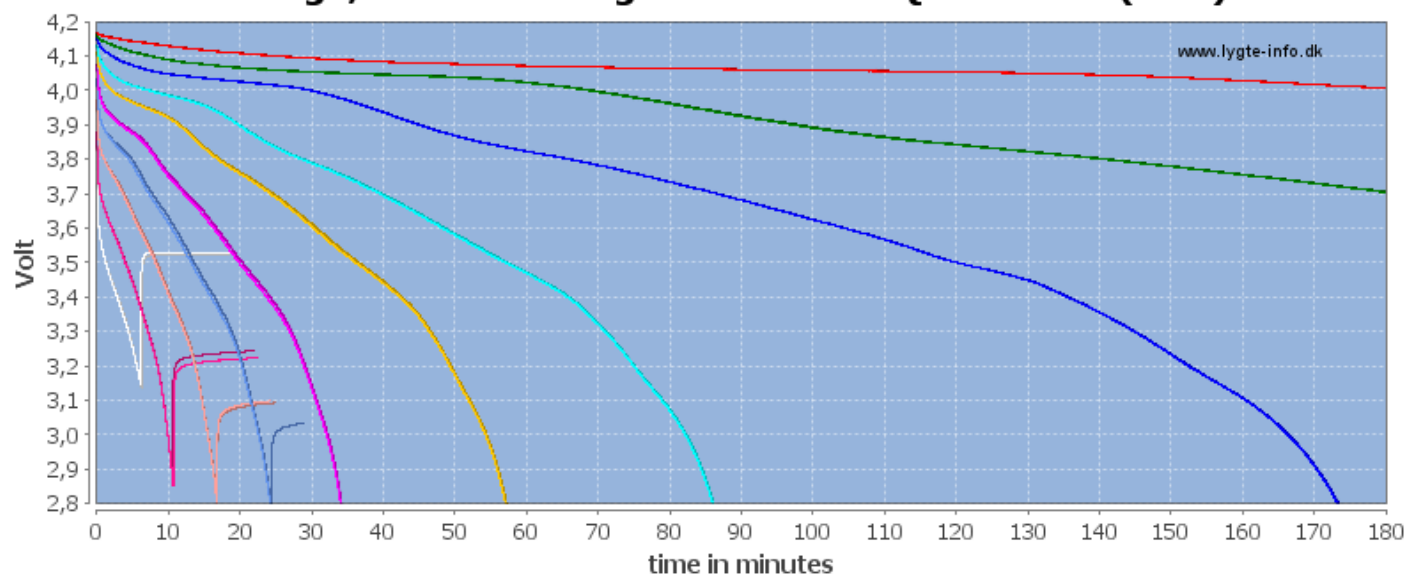


The cell can also handle 20A for some time, but you are supposed to stop when it gets hot (As I do here). Remember the chart shows above ambient temperature, the actual cell temperature goes above 75°C.

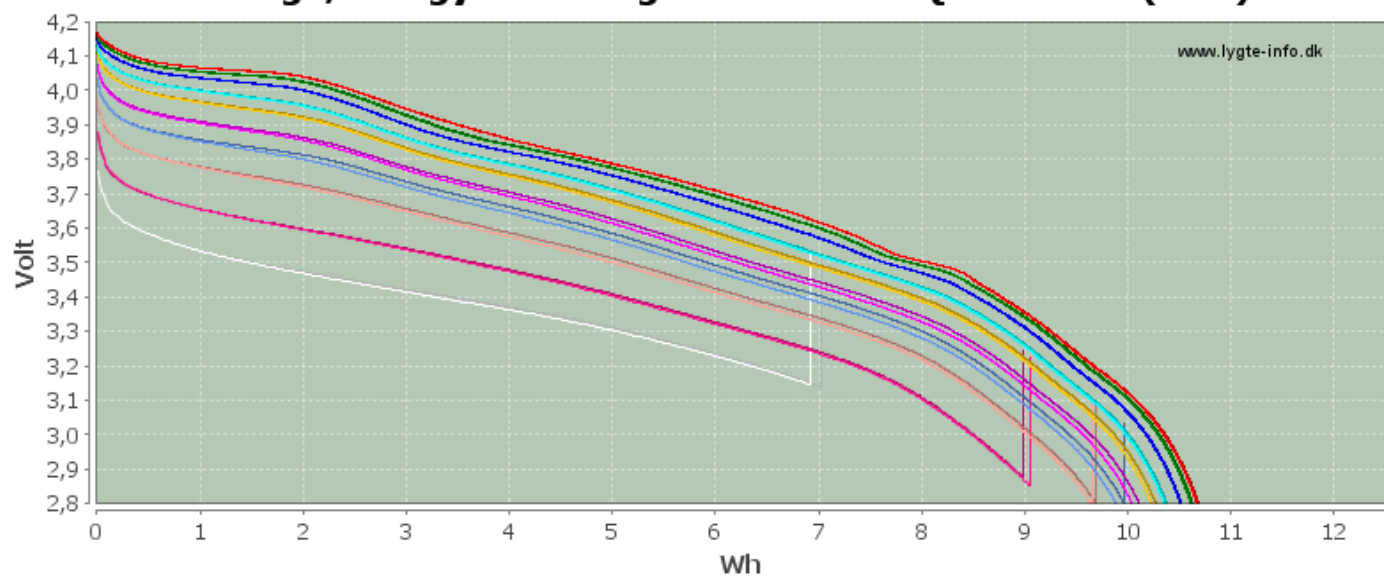
Discharge, time: Samsung INR18650-30Q 3000mAh (Pink)



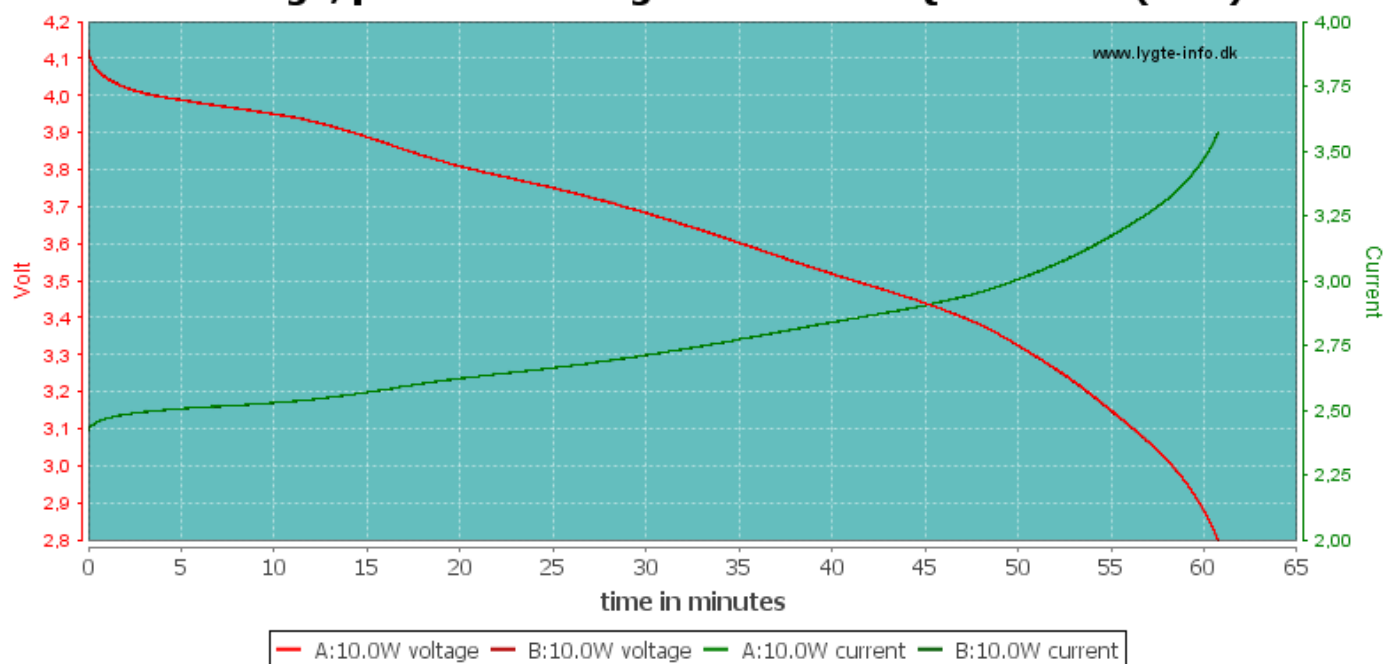
Discharge, time: Samsung INR18650-30Q 3000mAh (Pink)



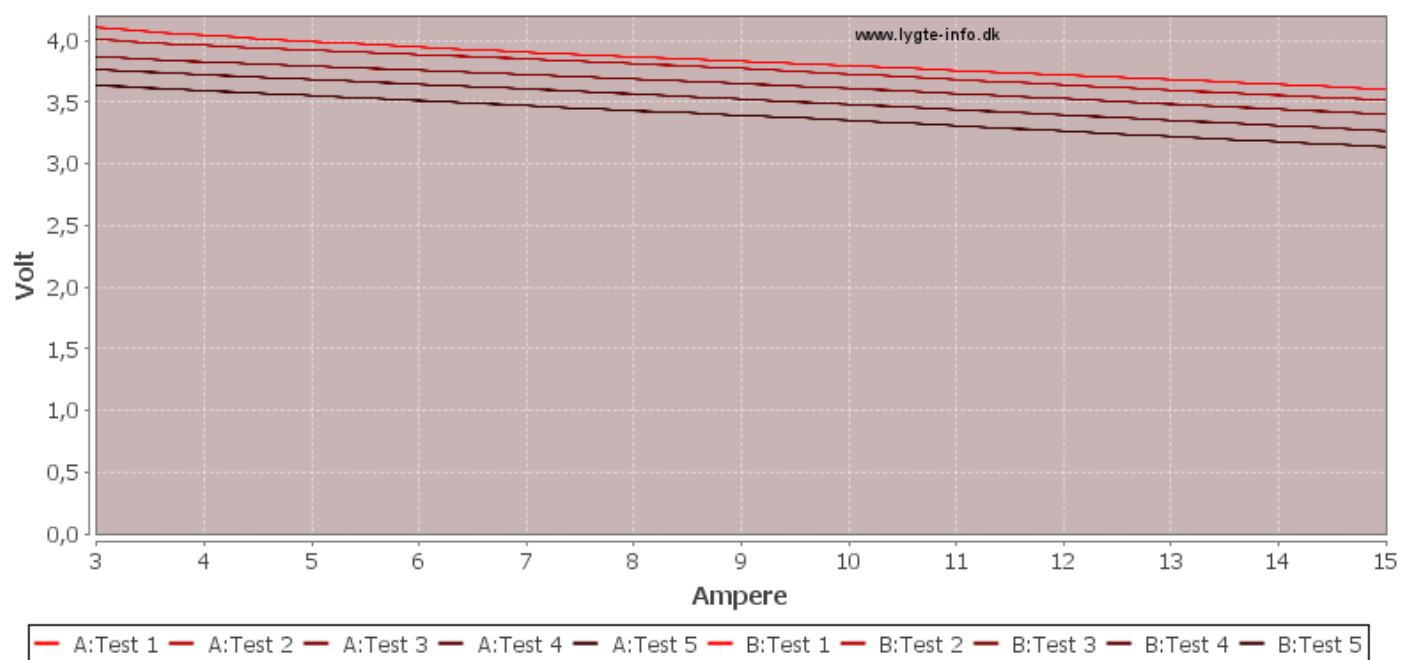
Discharge, energy: Samsung INR18650-30Q 3000mAh (Pink)



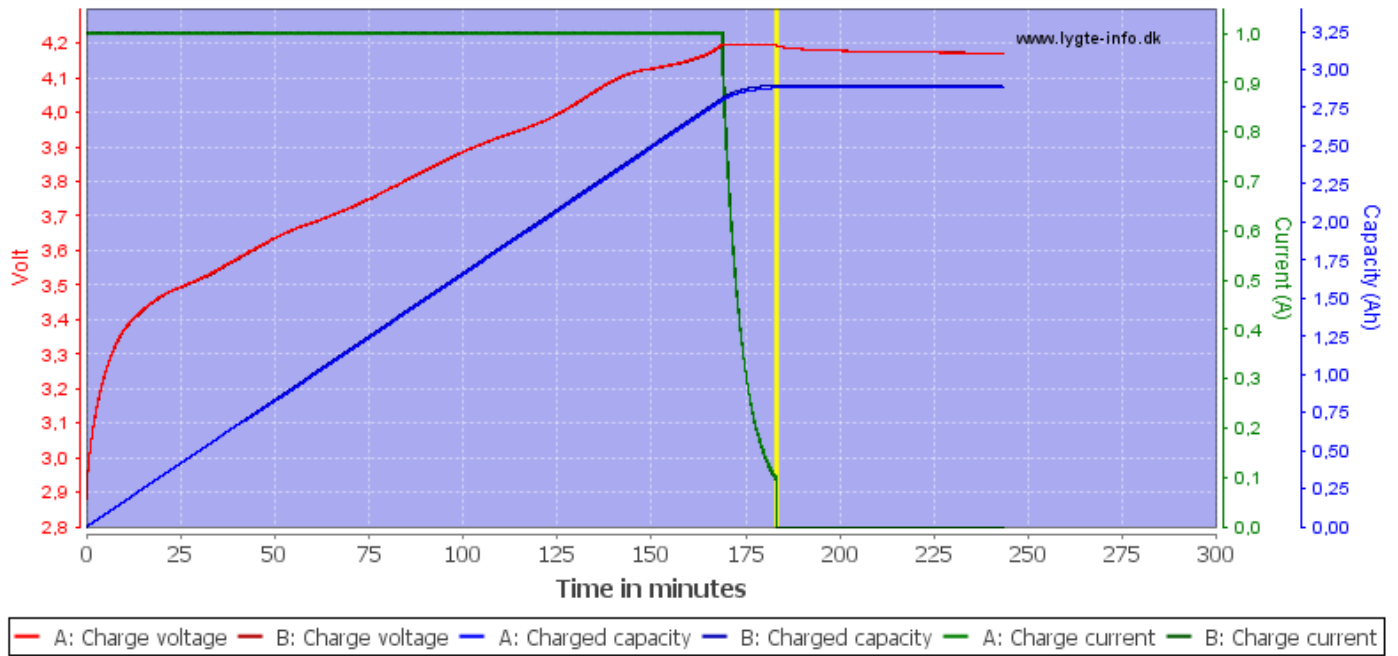
Discharge, power: Samsung INR18650-30Q 3000mAh (Pink)



Protection test: Samsung INR18650-30Q 3000mAh (Pink)



Charging: Samsung INR18650-30Q 3000mAh (Pink)



Conclusion

This cell is very good, it can handle about 15A continuous discharge and has no problems with 20A pulses.

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](#)
[Compare to 18650 and other batteries](#)