

Samsung INR18650-35E 3500mAh (Pink)



Official specifications:

- Nominal capacity: 3500mAh
- Minimum capacity: 3350mAh
- Nominal voltage: 3,6V - 3,7V
- Charging voltage: 4,2V
- Discharge current: 8A
- Maximum discharge current: 13A
- Charge current: 0,6C 2000mA
- Discharge end voltage: 2,65V
- Pluspol: FlatTop
- Chemistry: LiNiCoAlO₂
- Diameter: 18,55mm $\pm$ 0,1
- Height: 65,25mm $\pm$ 0,15
- Weight: 48g $\pm$ 1

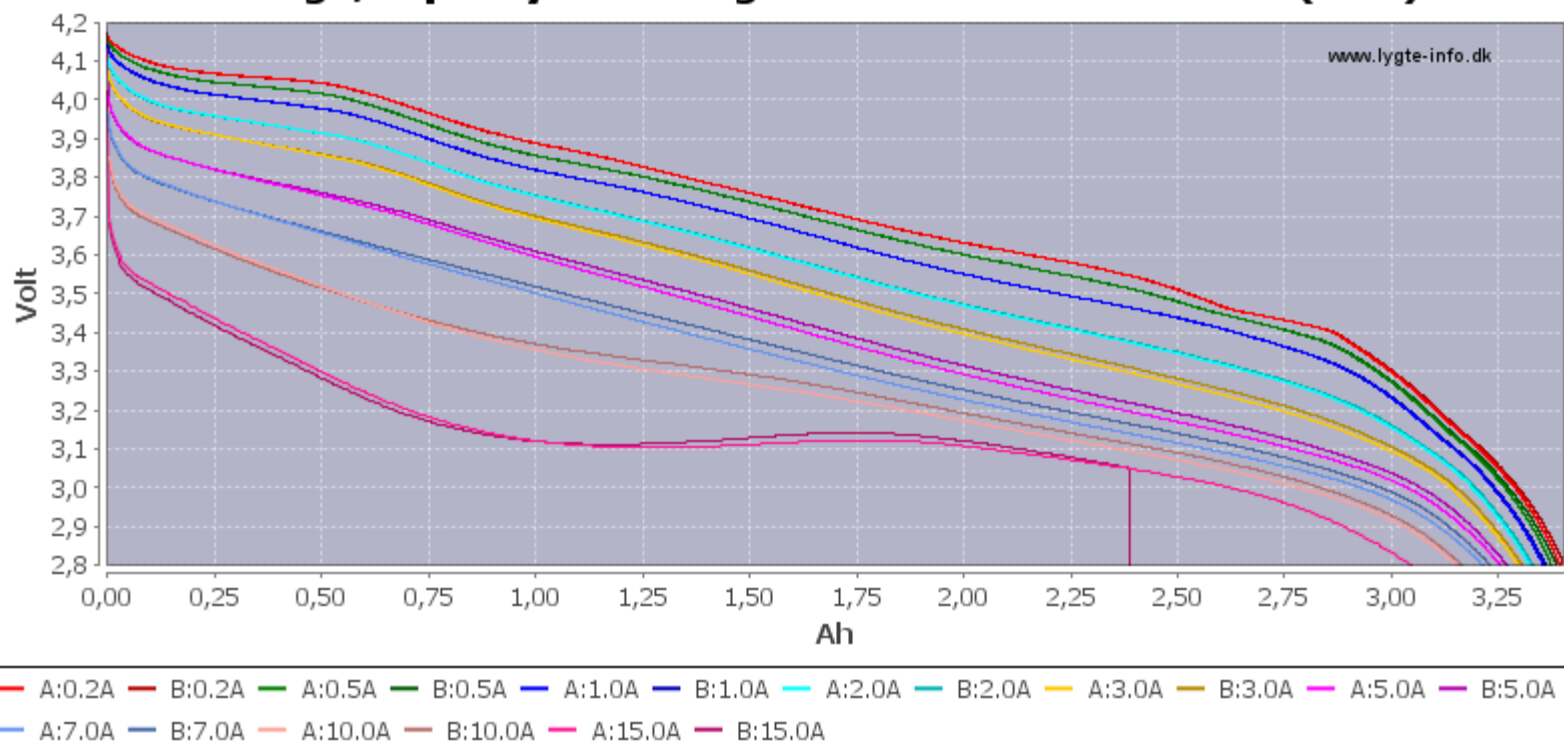
Name	Samsung INR18650-35E 3500mAh (Pink)					
Cell	Samsung INR18650-35E 3500mAh					
Supplier	Akkuteile.de				Date:	1-2016
Size	Weight:	48.3 g	Length:	65.0 mm	Diameter:	18.3 mm
Info	Top:	flat	Bottom:	metal	Rated A:	8
Test condition	Charge voltage:		4.2	Termination current:		0,1
Test current (A)	0,2	0,5	1	2	3	5
Measured capacity (Ah)	3,398	3,379	3,358	3,327	3,300	3,264
Measured energy (Wh)	12,505	12,365	12,167	11,838	11,565	11,158
PCB protection trip current (A)	NA					
Calculated internal resistance (ohm)	0,06					

This is one of the new high capacity cells.





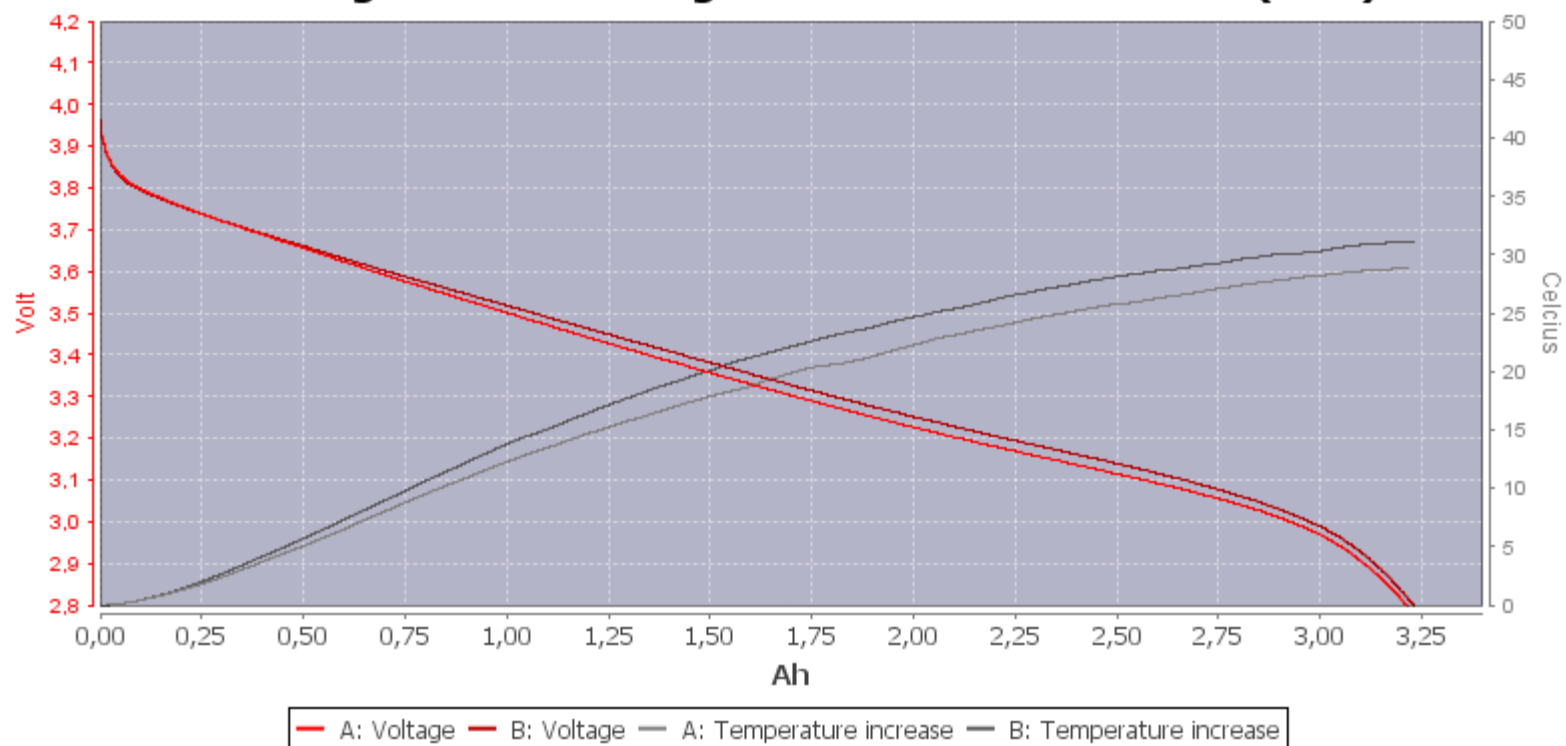
Discharge, capacity: Samsung INR18650-35E 3500mAh (Pink)



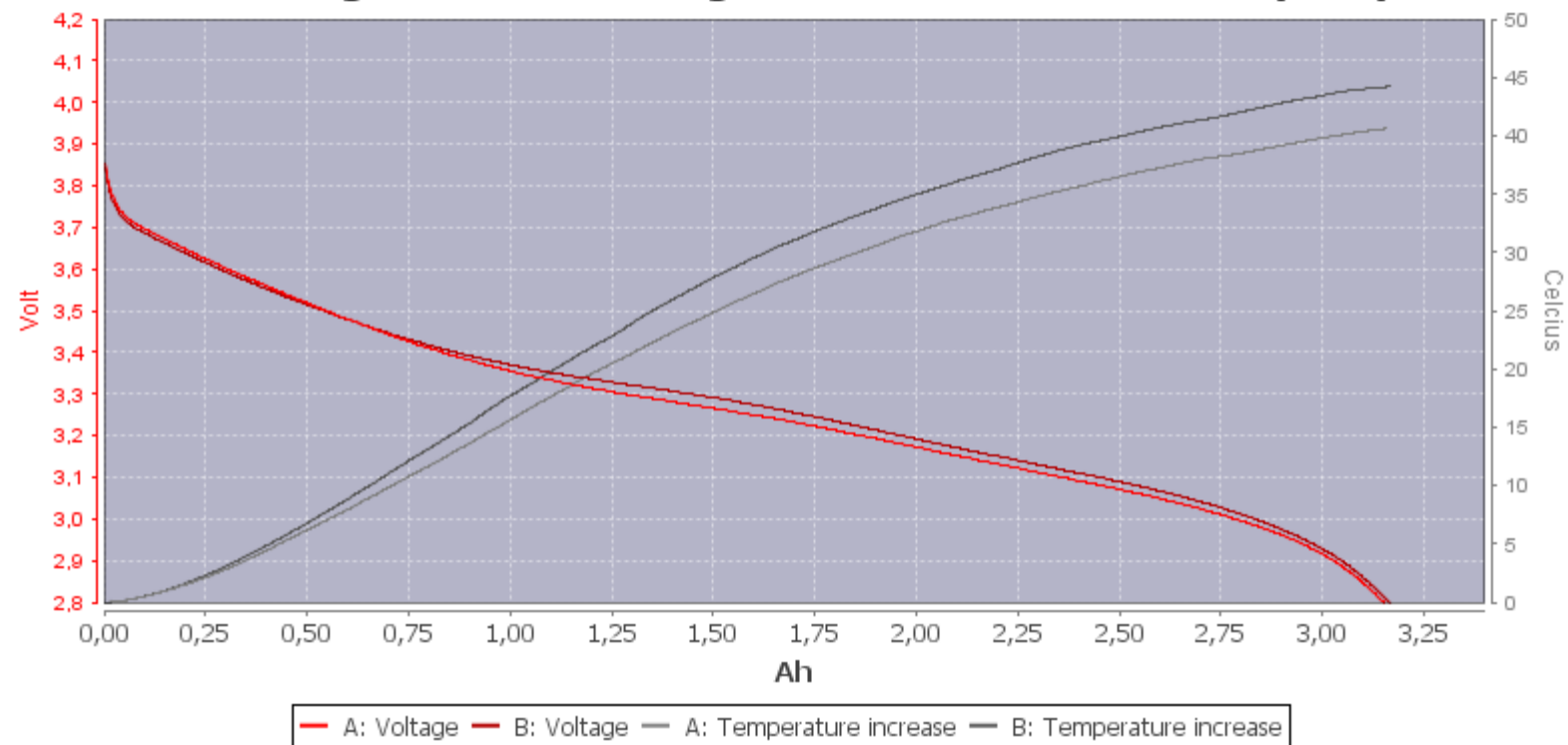
The discharge curves has good tracking.

At 15A the B track stops just after 2.3Ah, this is because my battery holder melts (I hope this is fixed now).

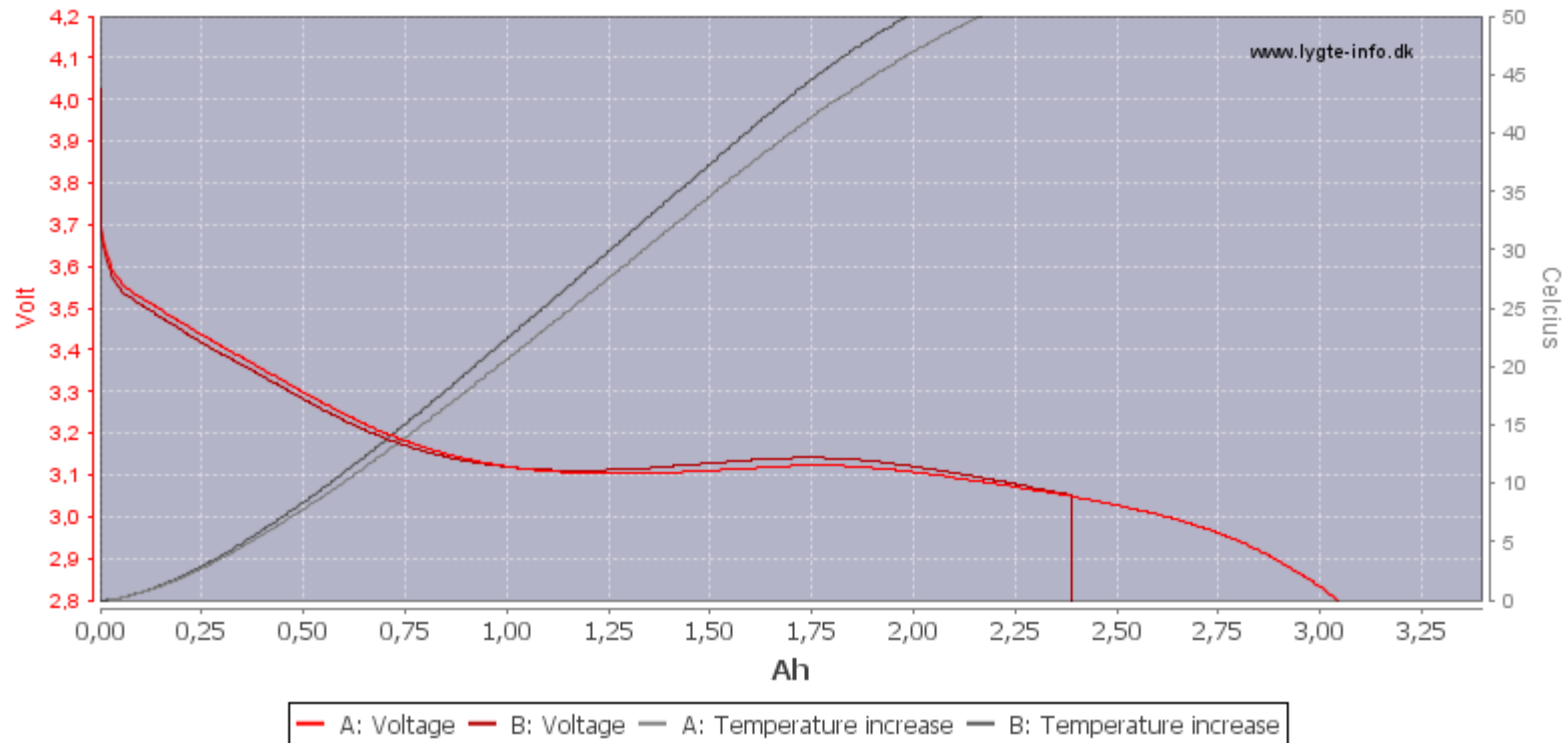
Discharge 7.0A: Samsung INR18650-35E 3500mAh (Pink)



Discharge 10.0A: Samsung INR18650-35E 3500mAh (Pink)

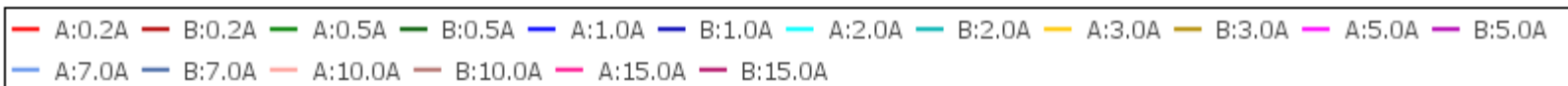
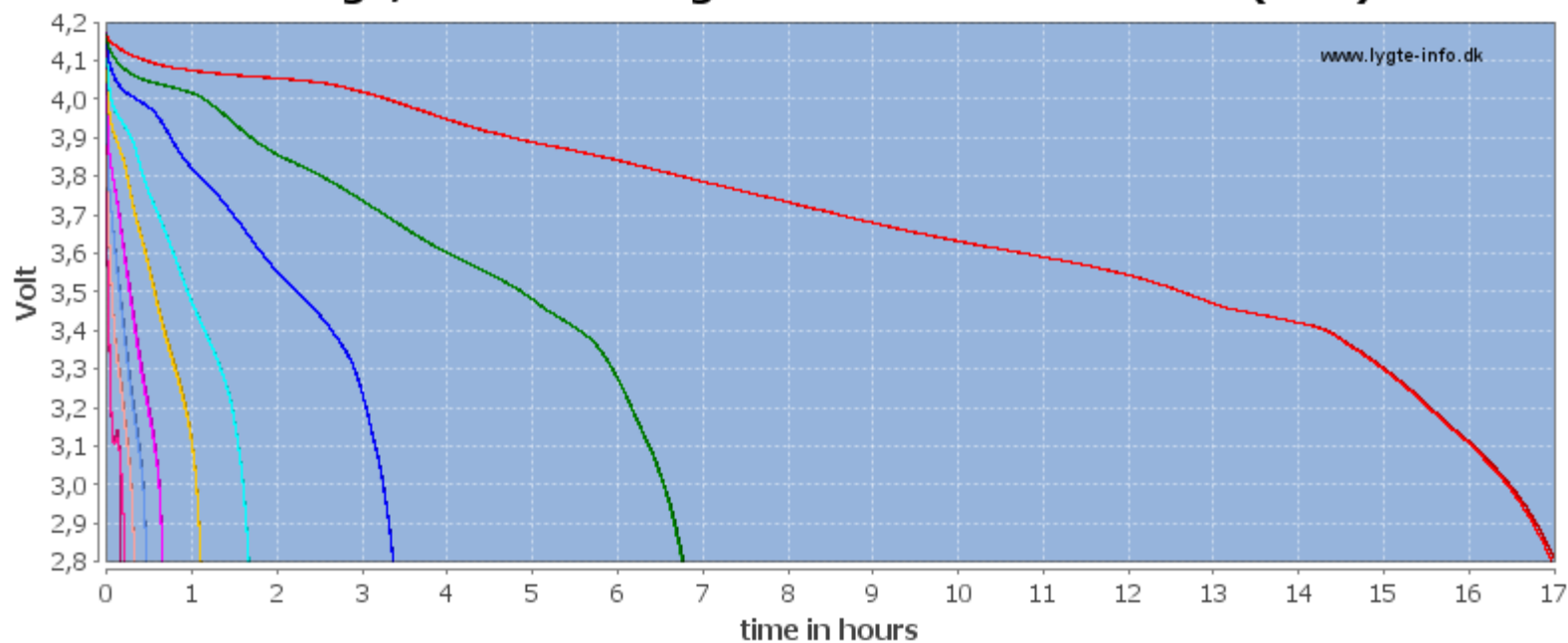


Discharge 15.0A: Samsung INR18650-35E 3500mAh (Pink)

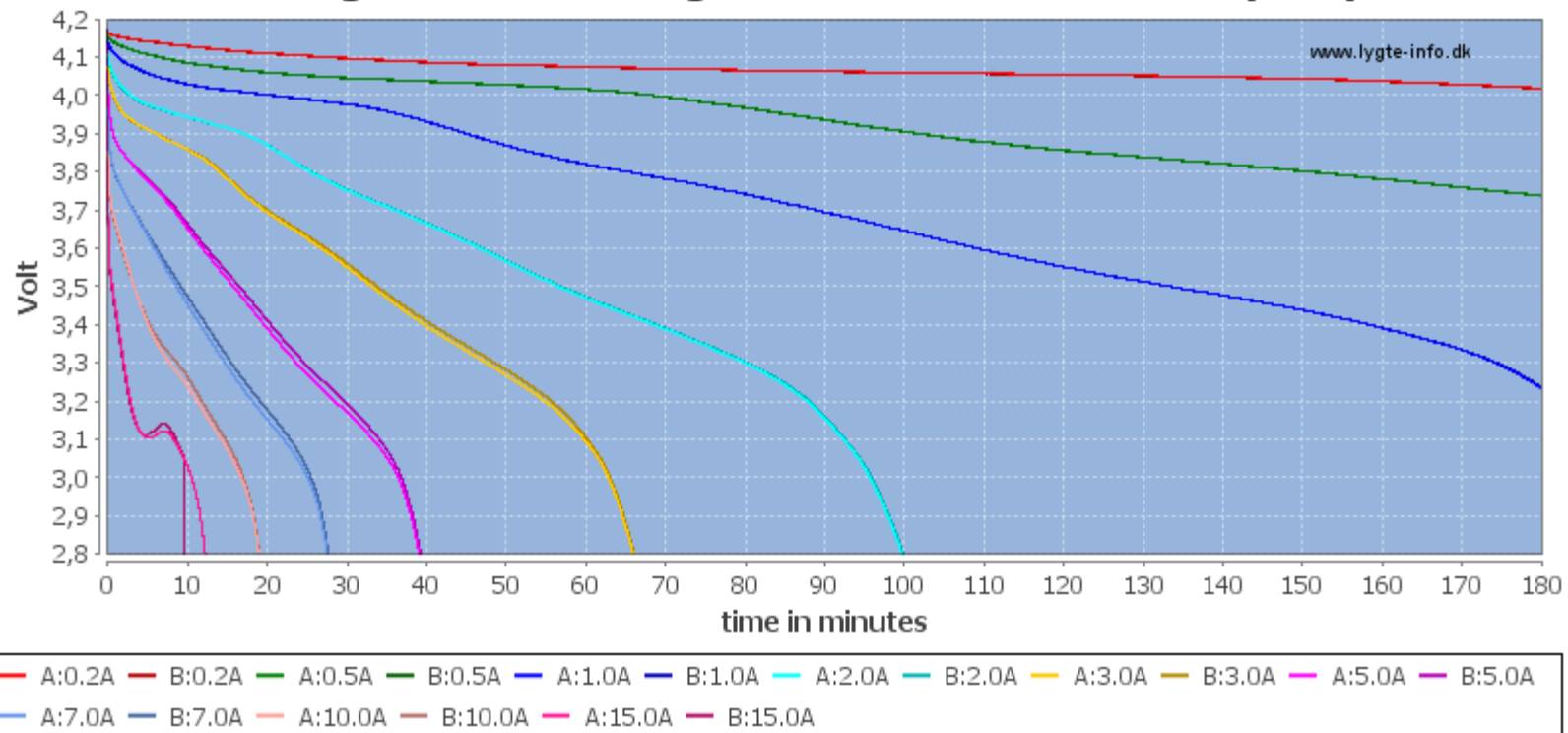


15A is definitely too high current for this cell. The cell temperature is above 75°C (25°C ambient + 50°C temperature raise). Logfile says 87°C for A cell.

Discharge, time: Samsung INR18650-35E 3500mAh (Pink)

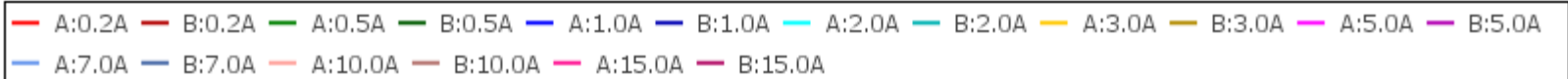
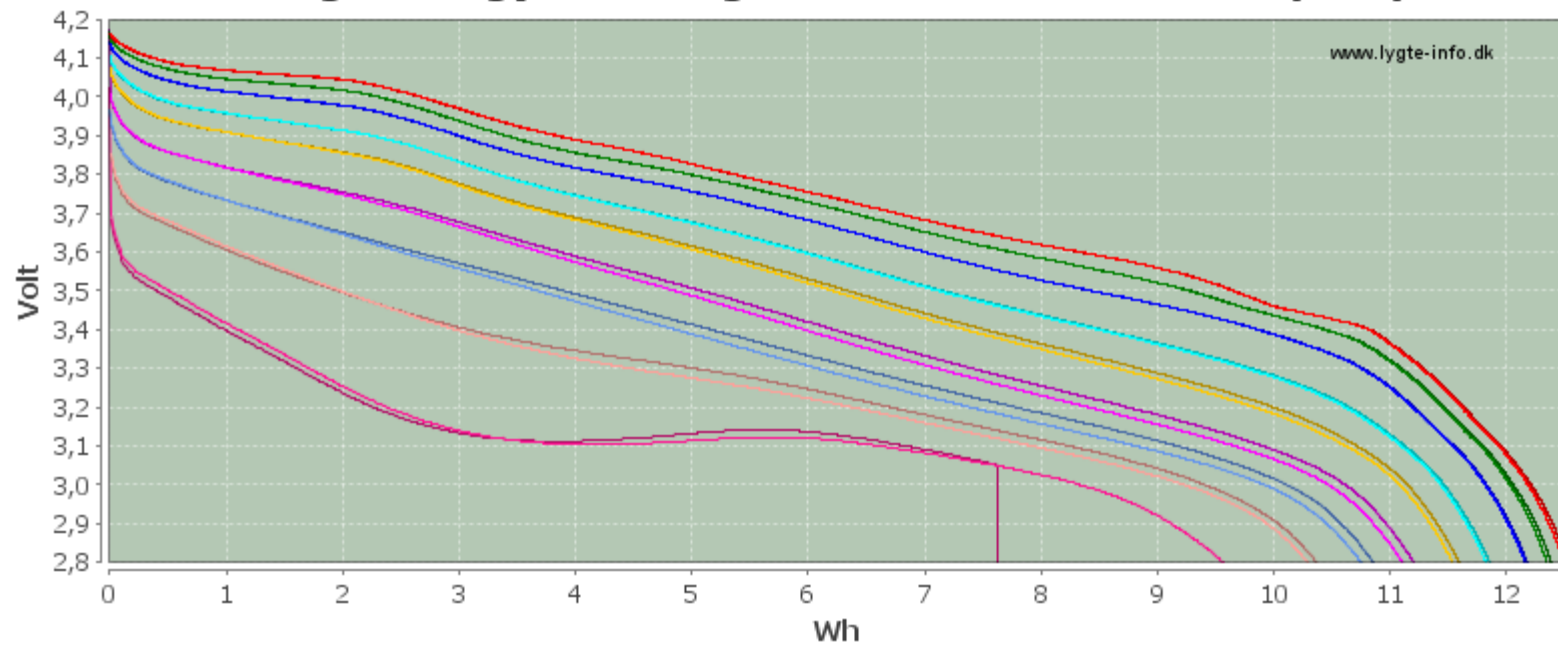


Discharge, time: Samsung INR18650-35E 3500mAh (Pink)

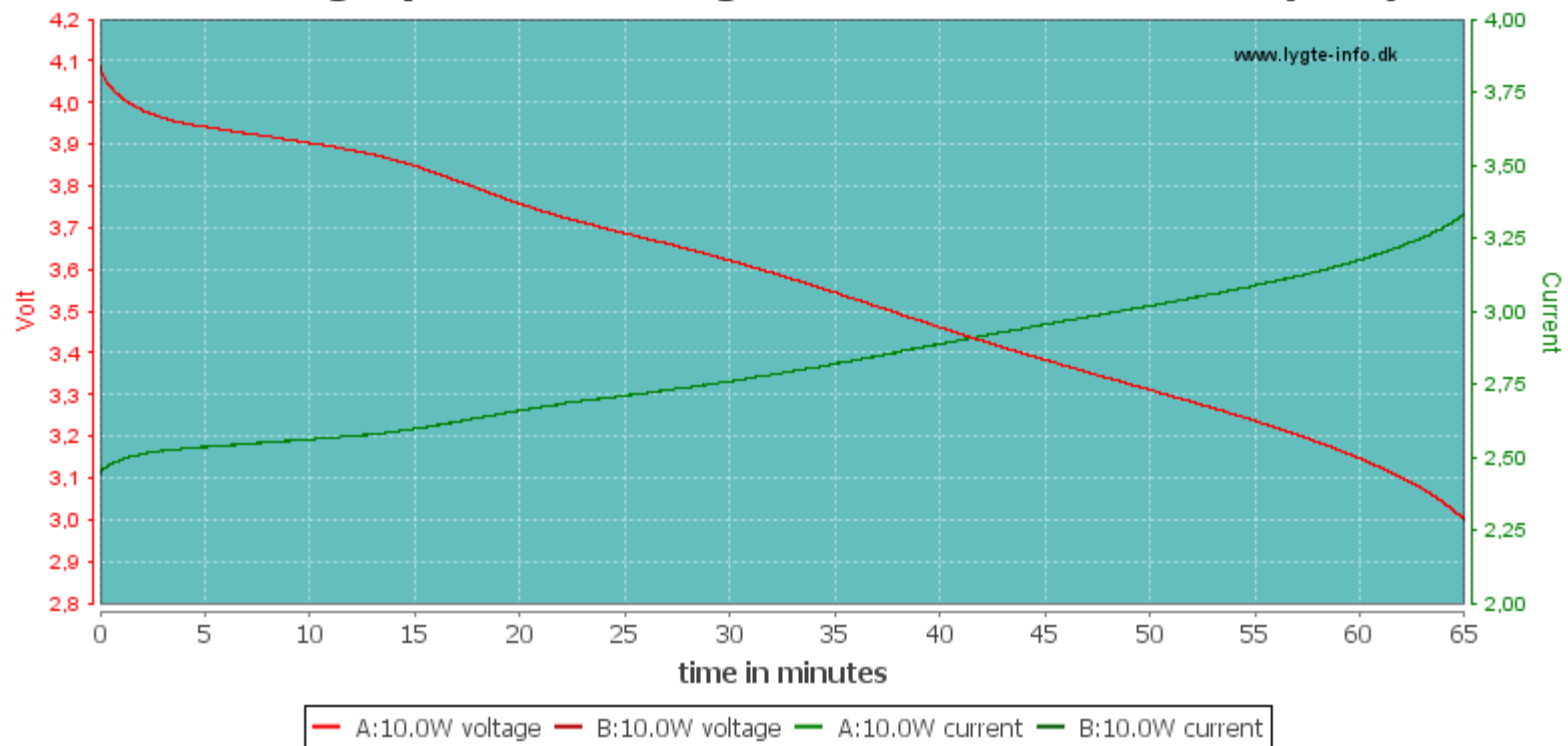


On this chart it is obvious how the heat improves the performance at 15A.

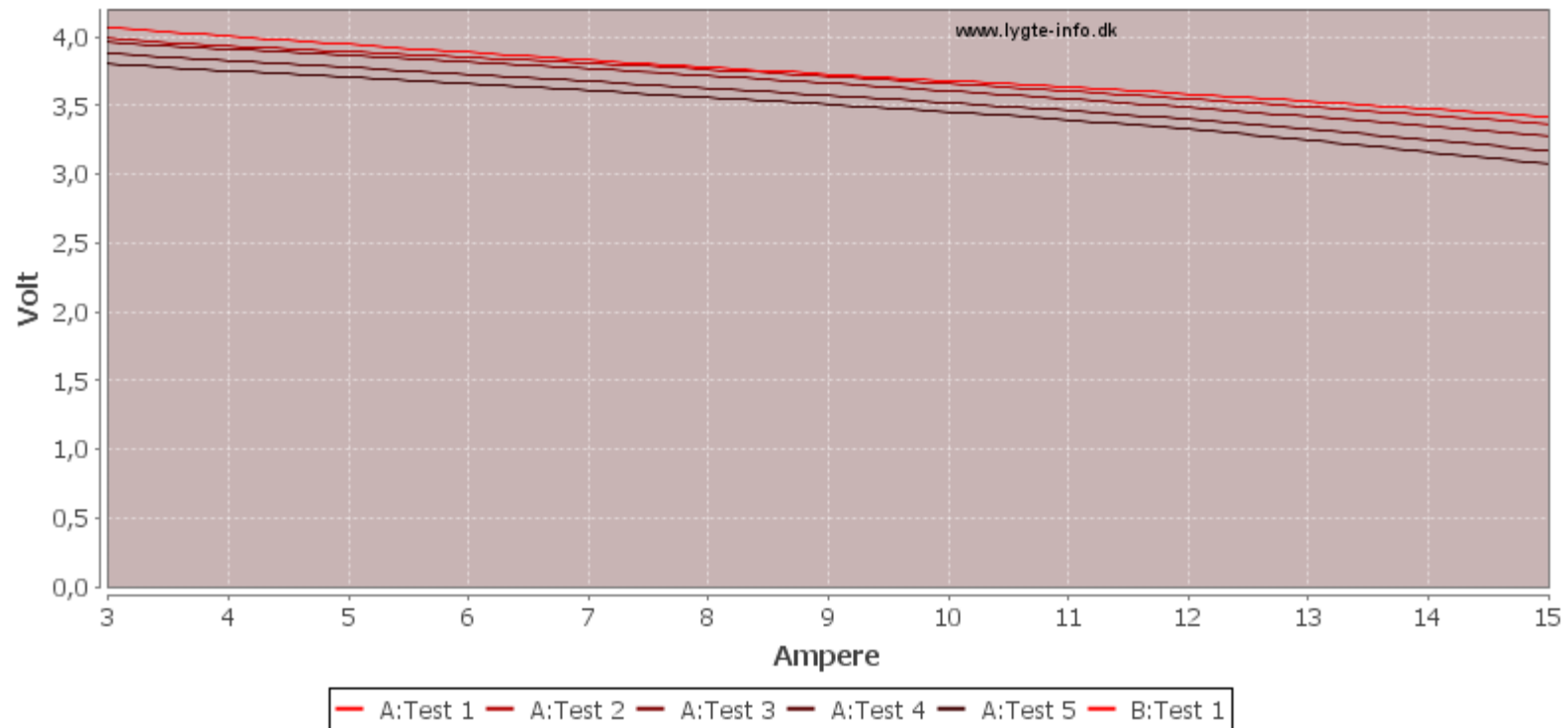
Discharge, energy: Samsung INR18650-35E 3500mAh (Pink)



Discharge, power: Samsung INR18650-35E 3500mAh (Pink)

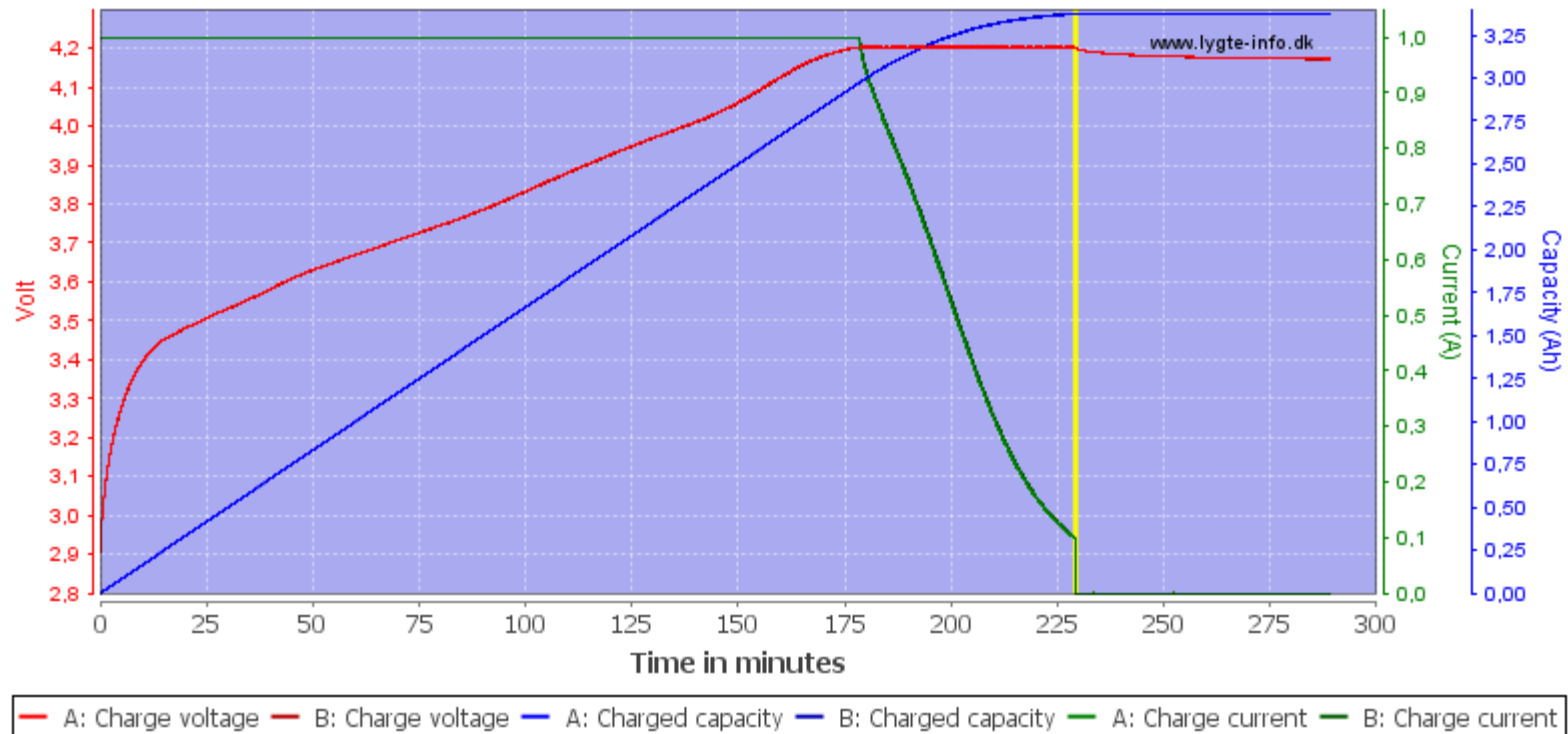


Protection test: Samsung INR18650-35E 3500mAh (Pink)



Due to the melted battery holder I did only do this for one cell.

Charging: Samsung INR18650-35E 3500mAh (Pink)



Conclusion

The cell looks very good, it has lot of capacity and can handle some current, but I will not recommend it above 10A.