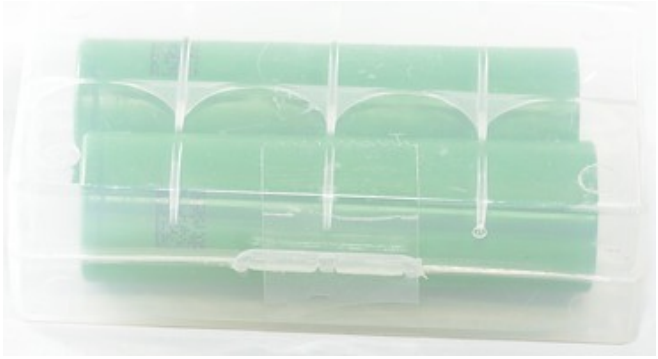
Sony US18650VTC6 3000mAh (Green)

Official specifications:

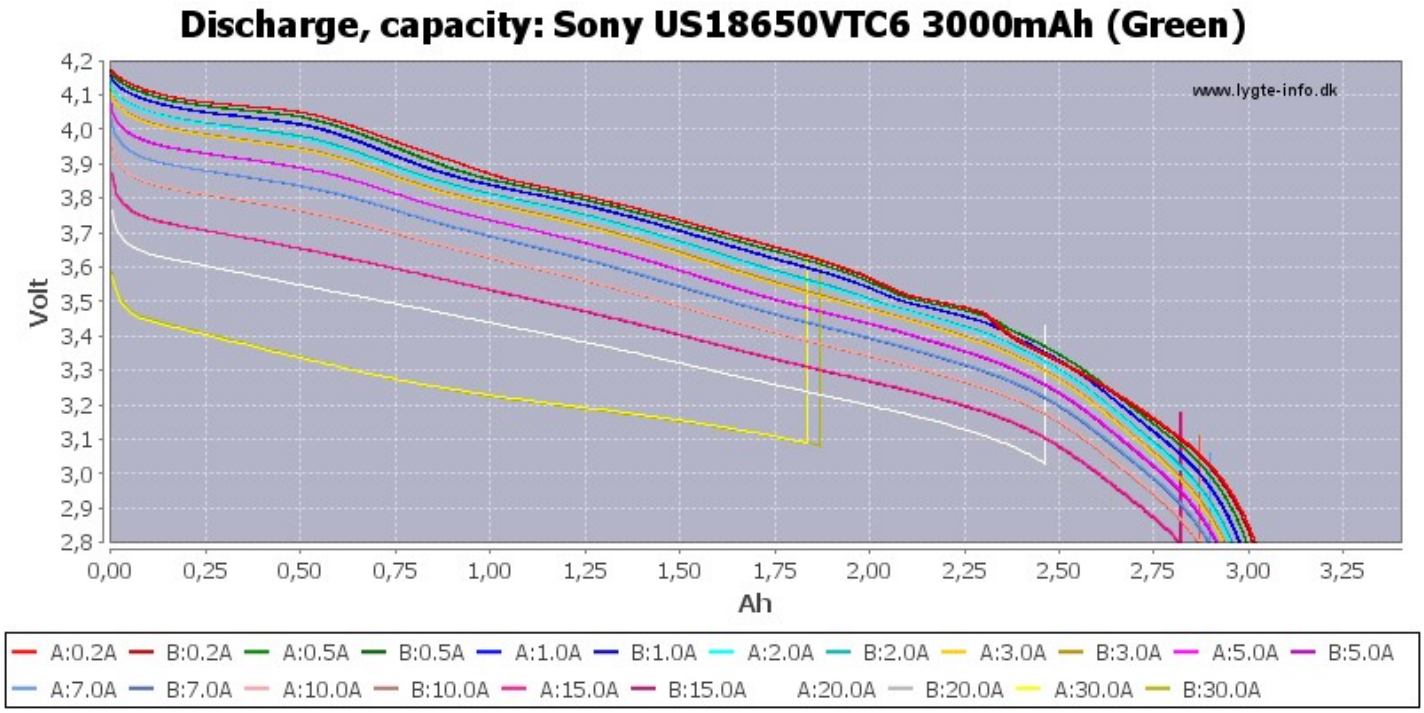
- Typical capacity: 3120mAh
- Minimum capacity: 3000mAh
- Nominal voltage: 3.6V
- Standard charge: CC/CV, 0.2C, 4.2V
- Standard discharge: CC, 0.2C, 2.5V
- End-of-charge voltage: 4.2V +/-0.05V
- End-of-charge current: 0.02C (About 62mA)
- End-of-discharge voltage: 2.00V
- Continuous maximum discharge: 5C/10C (15A/30A) with temp cutoff at 80°C
- Max. discharge current vs. time: 30A-40A > 44s, 55A > 19s, 80A > 6s (Never discharge above 80°C)
- Cycle life: 300 cycles @ 0.5C to 80%
- Initial impedance: 8mOhm - 18mOhm
- Weight: 46.4g +/- 1.5g
- Operating temperature: Charging 0°C ~45°C, discharging: -20°C ~ 60°C
- Storage temperature: -5°C ~ 35°C

Name	**Sony US18650VTC6 3000mAh (Green)**					
Cell	Sony US18650VTC6 3000mAh					
Supplier	Enerpower				Date:	7-2016
Size	Weight:	**46.9 g**	Length:	**65 mm**	Diameter:	**18.3 mm**
Info	Top:	**flat**	Bottom:	**metal**	Rated A:	**30**
Test condition		Charge voltage:	4.2		Termination current:	0,1
Test current (A)	0,2	0,5	1	2	3	5
Measured capacity (Ah)	3,014	2,994	2,976	2,954	2,935	2,917
Measured energy (Wh)	11,087	11,005	10,895	10,737	10,595	10,409
PCB protection trip current (A)	**NA**					
Calculated internal resistance (ohm)	**0,03**					

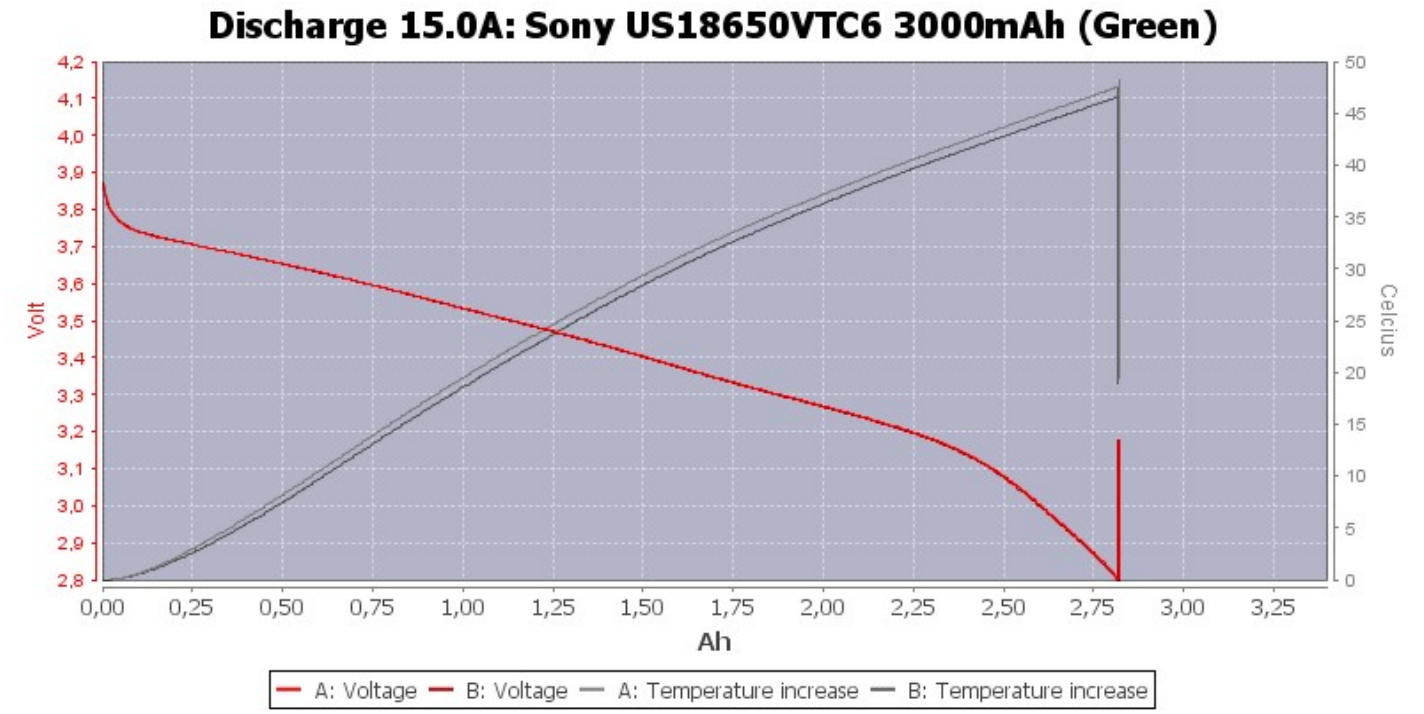
The latest and probably last high current battery from Sony and it was a very high capacity together with the high current.



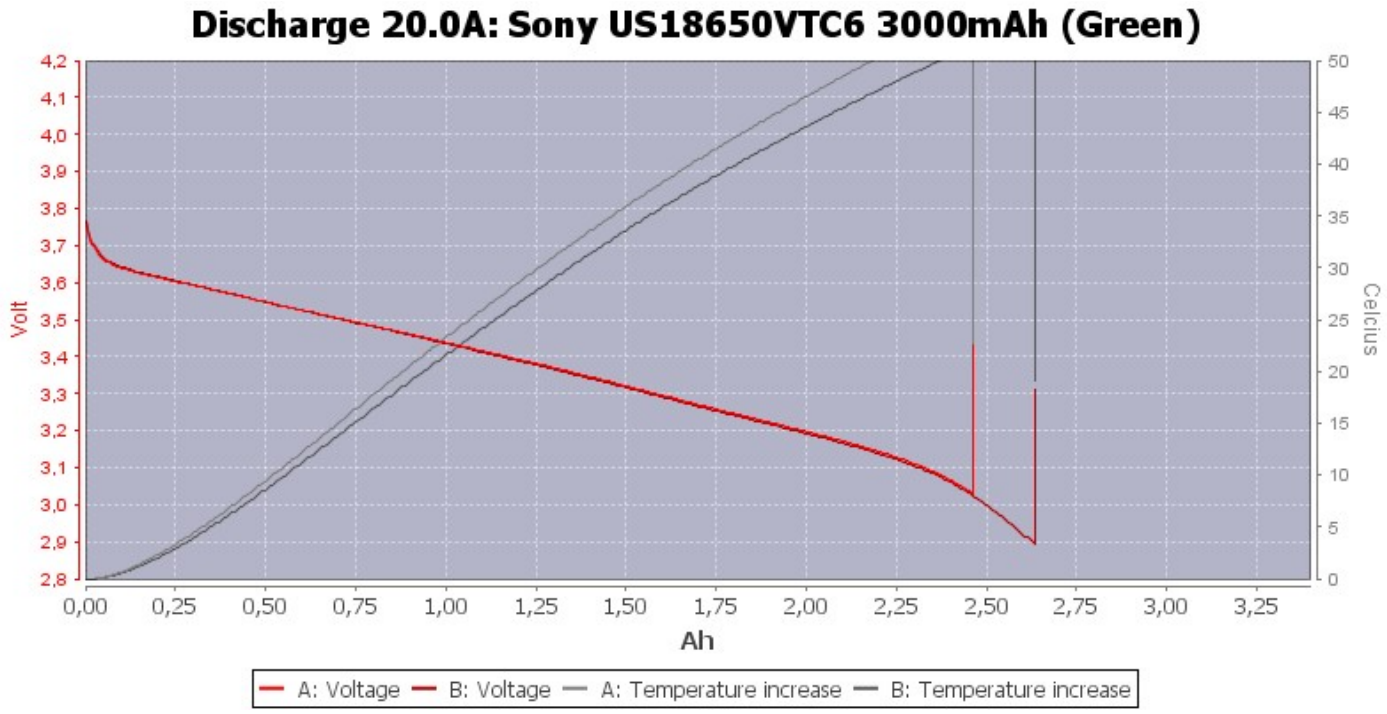

SE US18650VTC6
K 06A13YB09T
DANGER
DO NOT USE OUTSIDE
OF BATTERY PACK

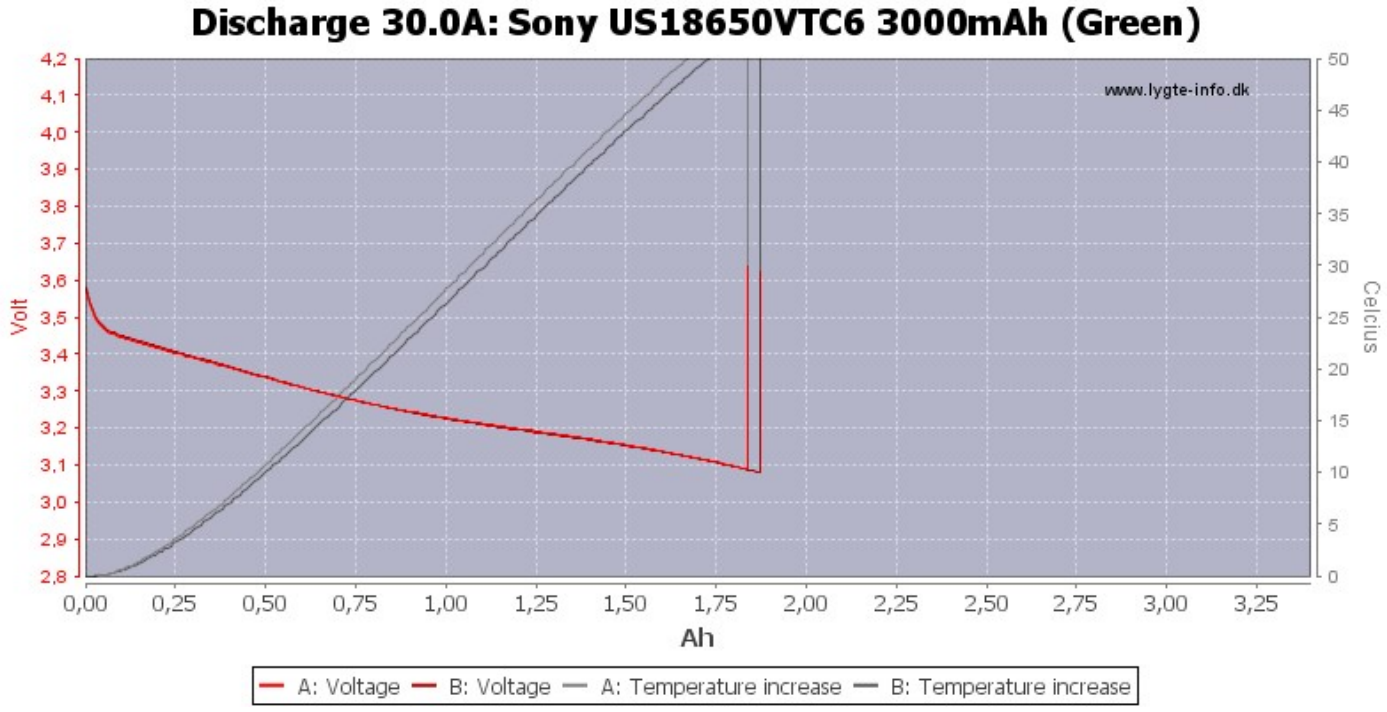


There is no doubt this is a quality battery, the curves track perfectly and capacity is nearly constant with current.
At high current the battery gets hot and I stopped the 20A and 30A test due to that.

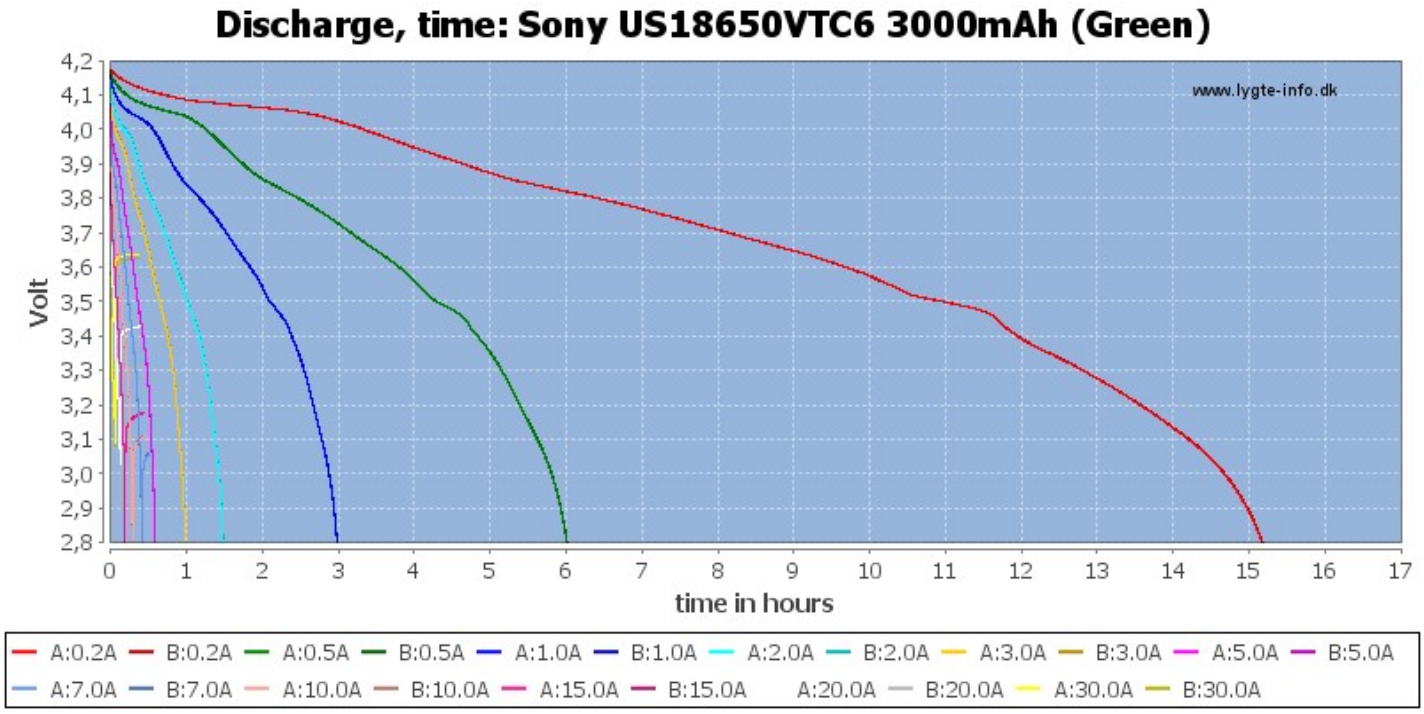


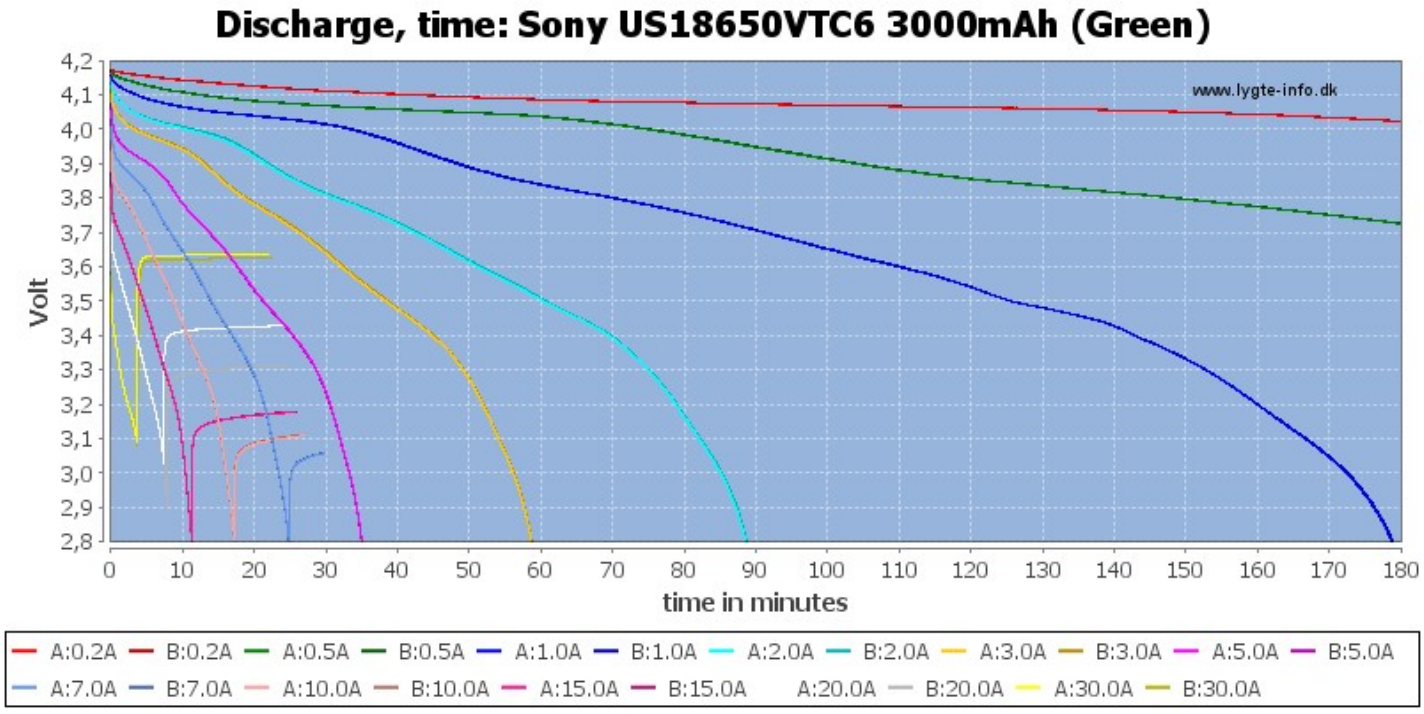
At 15A or greater Sony species that there must be a temperature cut-out at 80°C, I could just stay below that at 15A



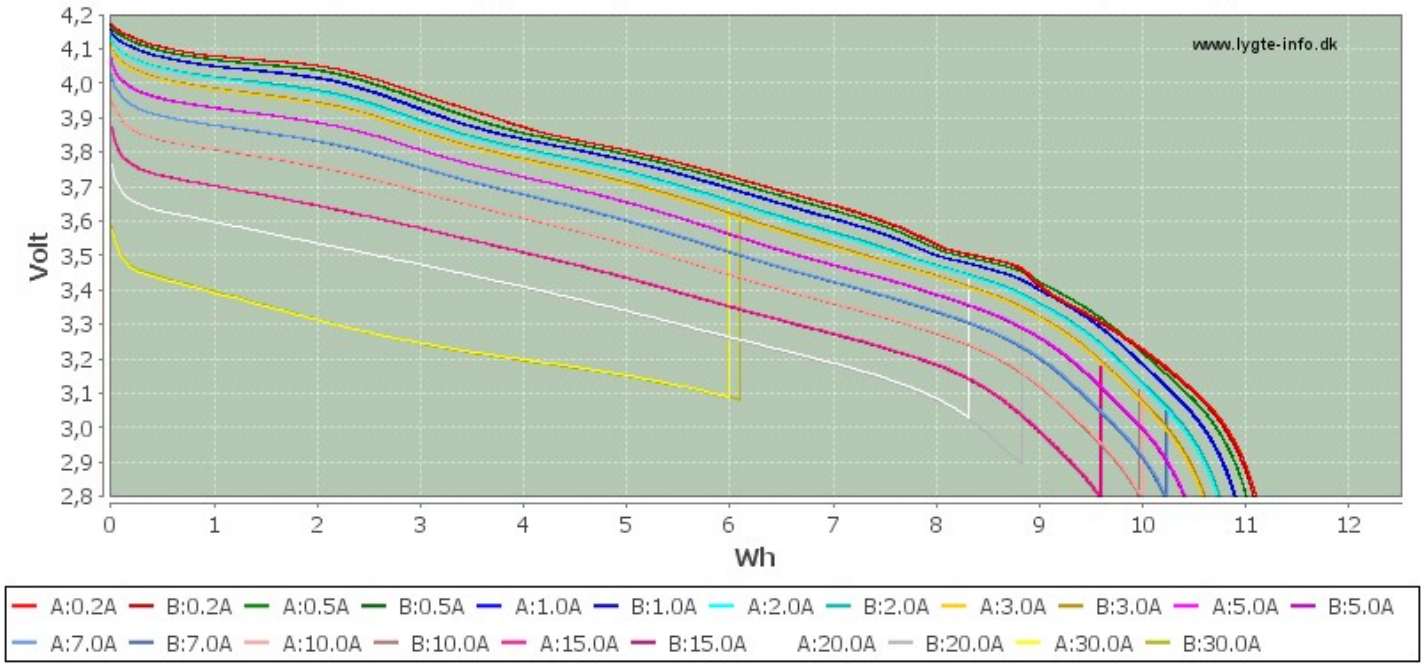


But at 20A and 30A I hit 80°C or rather went above. Here I was up to 91°C.

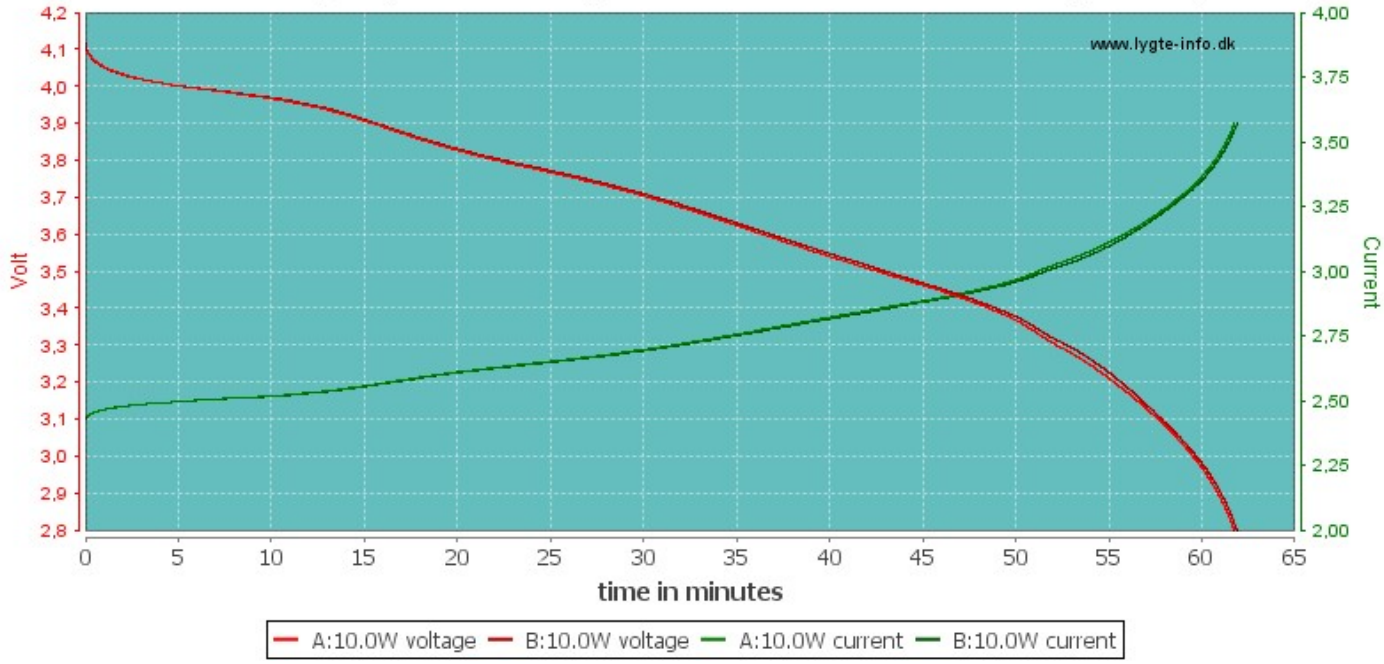

Discharge, time: Sony US18650VTC6 3000mAh (Green)
www.lygte-info.dk
Volt
time in hours
A:0.2A B:0.2A A:0.5A B:0.5A A:1.0A B:1.0A A:2.0A B:2.0A A:3.0A B:3.0A A:5.0A B:5.0A
A:7.0A B:7.0A A:10.0A B:10.0A A:15.0A B:15.0A A:20.0A B:20.0A A:30.0A B:30.0A

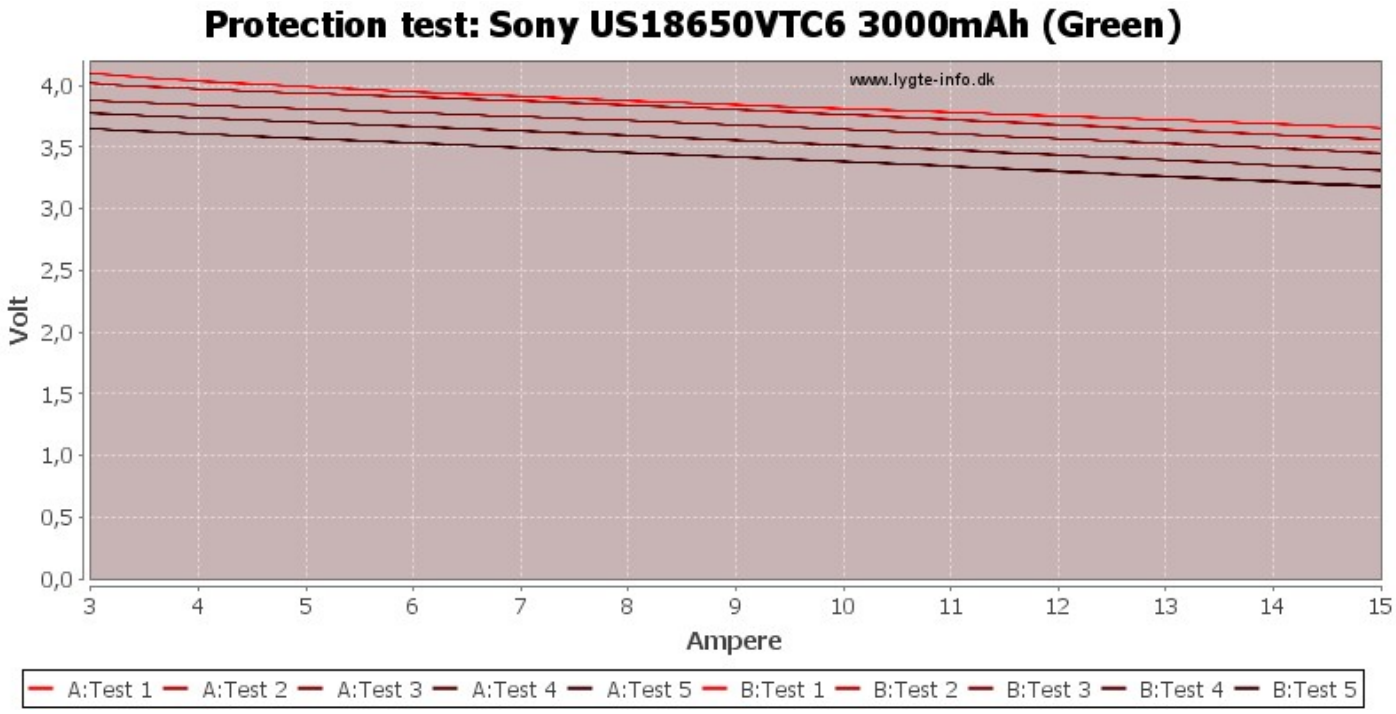

Discharge, time: Sony US18650VTC6 3000mAh (Green)
www.lygte-info.dk
Volt
time in minutes
A:0.2A B:0.2A A:0.5A B:0.5A A:1.0A B:1.0A A:2.0A B:2.0A A:3.0A B:3.0A A:5.0A B:5.0A
A:7.0A B:7.0A A:10.0A B:10.0A A:15.0A B:15.0A A:20.0A B:20.0A A:30.0A B:30.0A

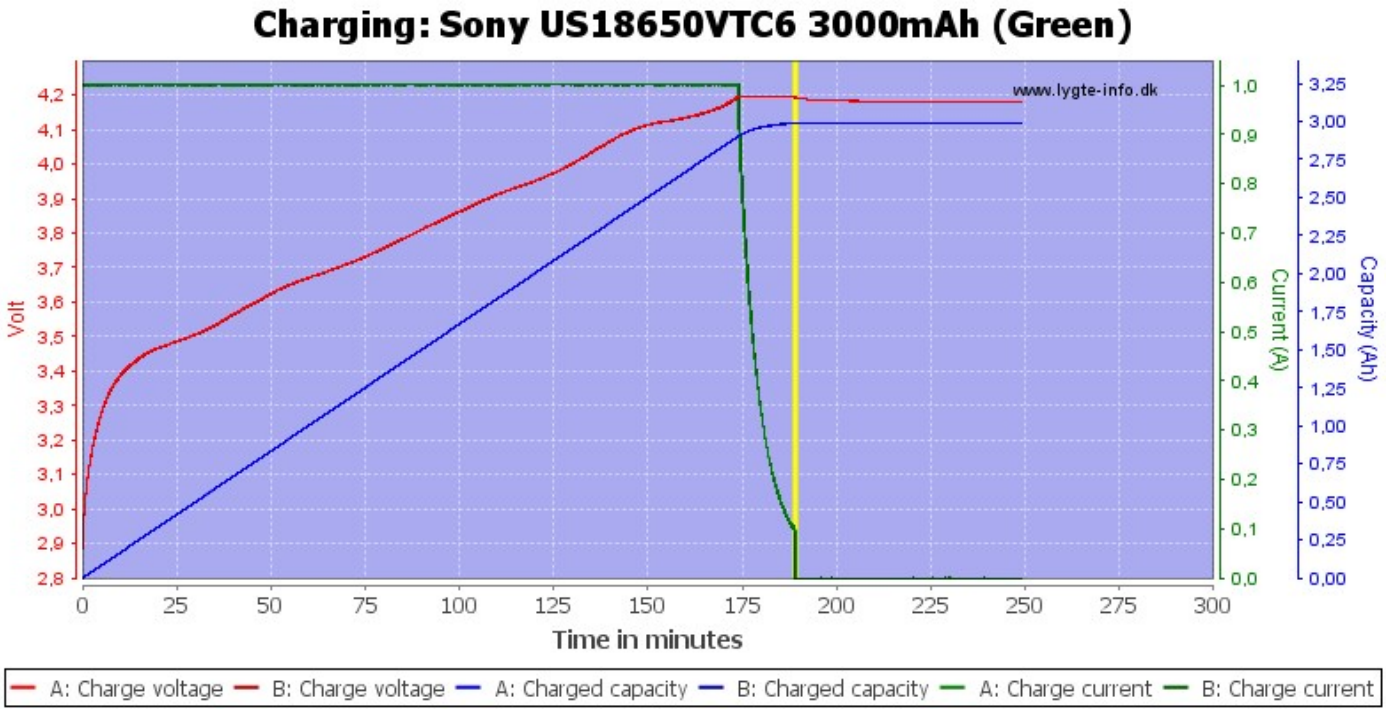
Discharge, energy: Sony US18650VTC6 3000mAh (Green)



Discharge, power: Sony US18650VTC6 3000mAh (Green)







Conclusion

Very few batteries can handle high current as well as Sony VTC batteries and this cell also high capacity.
But this cell is not "draw all the current you want and stay safe" (That type of battery do not exist), to stay safe some requirements must be fulfilled!

I will rate it a very good battery.

Notes and links

The batteries was supplied by ENERDan for review.
Sony are in the process of selling their battery division (Except alkaline) to Murata.

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