

Keeppower IMR18650 NH1831 3120mAh (Black) 2016

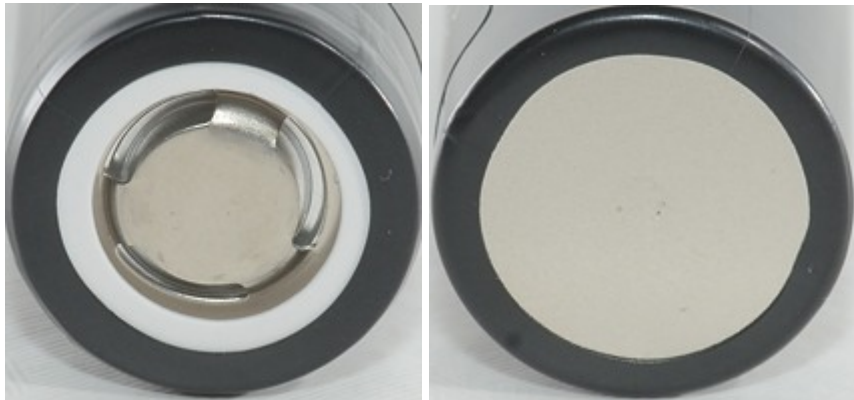


Official specifications:

- Nominal capacity: 3120mAh
- Minimum capacity: 3000mAh
- Nominal voltage: 3.70V
- Charge voltage: 4.20V 0/-0.05V
- Standard discharge cut-off: 2.50V
- Standard charge current: 1000mA
- Charge current cut-off: 50mA
- Max. Constant discharge current: 30A

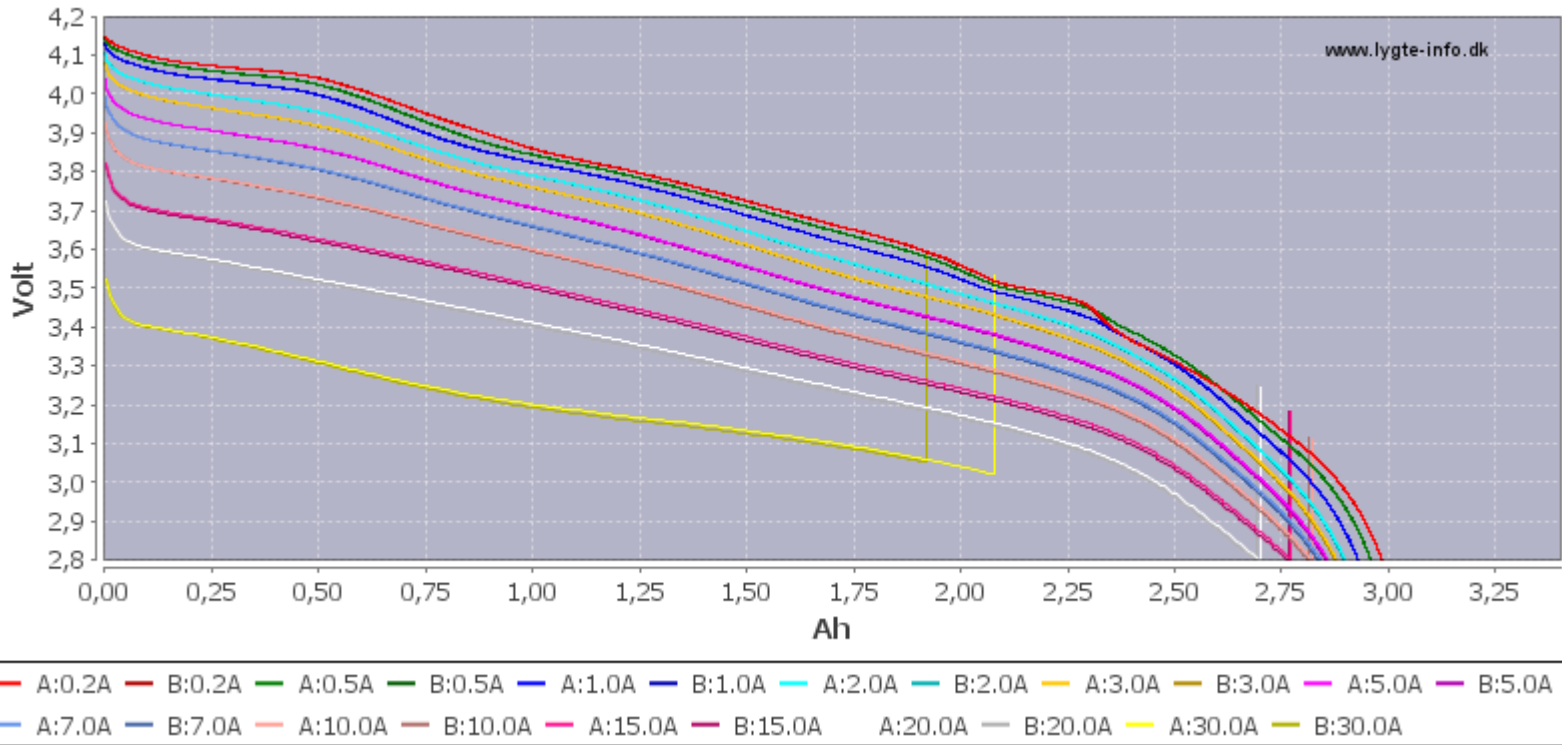
Name	Keppower IMR18650 NH1831 3120mAh (Black) 2016					
Cell						
Supplier	Keppower				Date:	11-2016
Size	Weight:	47.3 g	Length:	65.2 mm	Diameter:	18.4 mm
Info	Top:	flat	Bottom:	metal	Rated A:	30
Test condition	Charge voltage:		4.20	Termination current:		0,1
Test current (A)	0,2	0,5	1	2	3	5
Measured capacity (Ah)	2,984	2,958	2,929	2,898	2,877	2,856
Measured energy (Wh)	10,964	10,855	10,699	10,496	10,344	10,131
PCB protection trip current (A)	NA					
Calculated internal resistance (ohm)	0,03					

A high current and high capacity cell from Keppower.



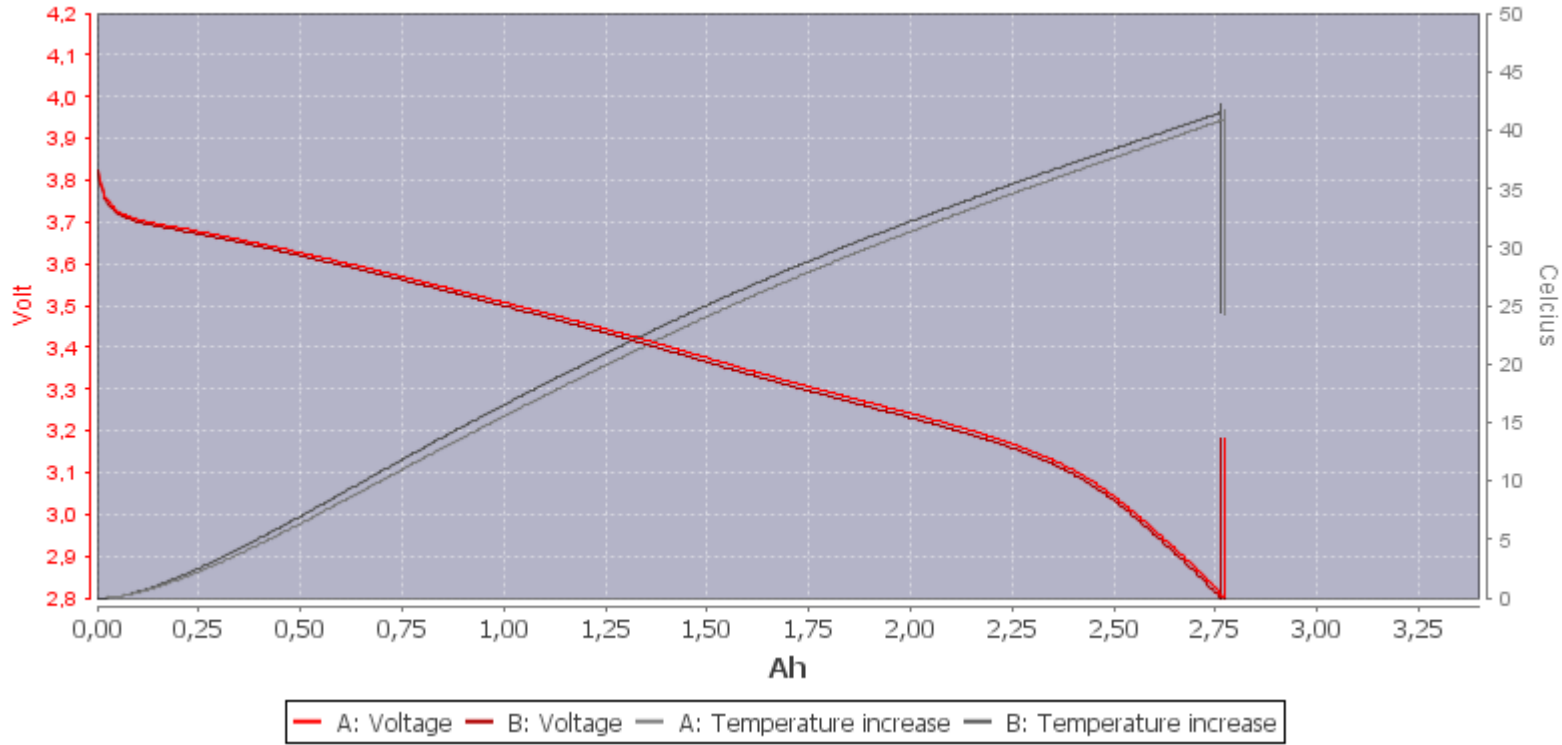


Discharge, capacity: Keeppower IMR18650 NH1831 3120mAh (Black) 2016

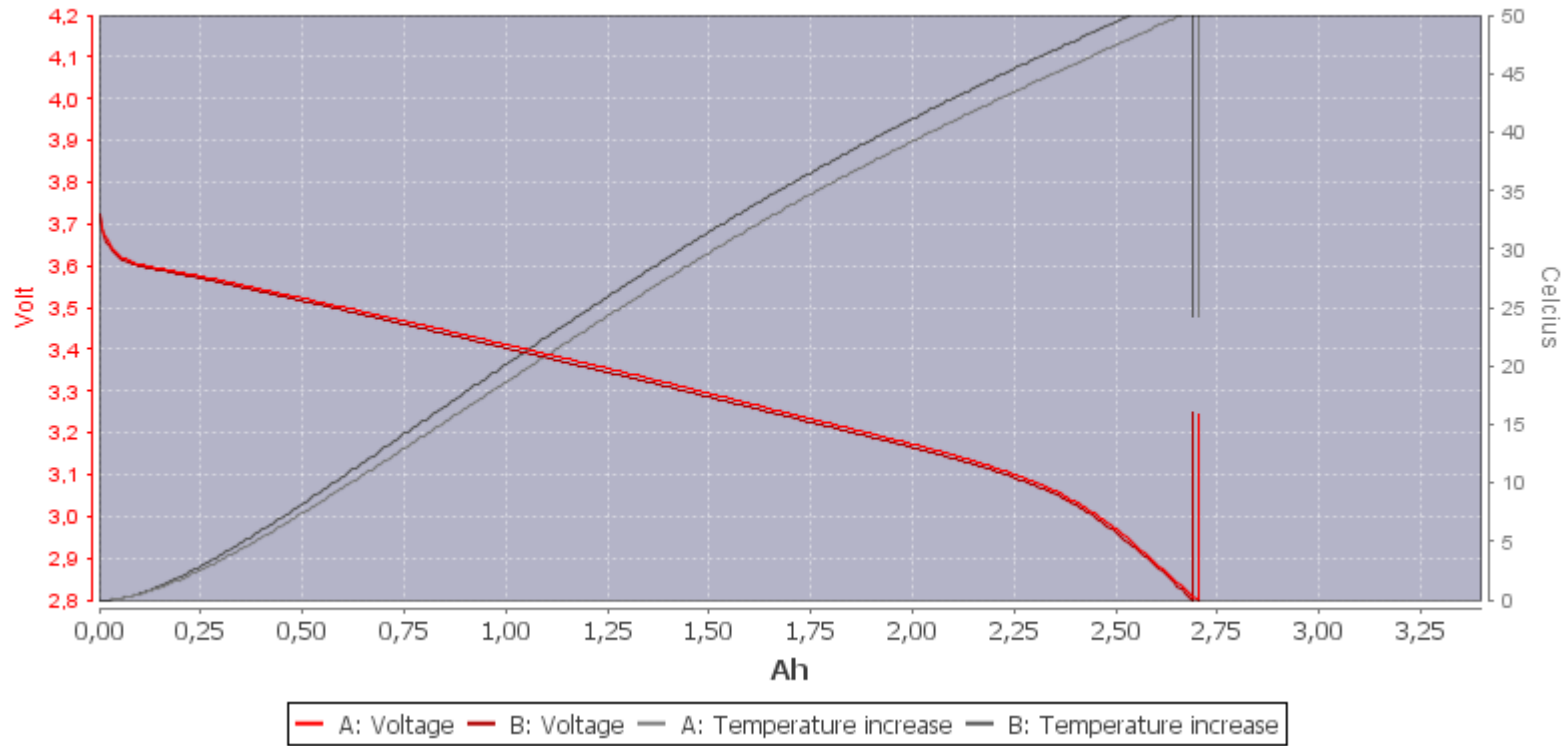


There is no doubt this is a quality battery, the curves track perfectly and capacity is nearly constant with current. At high current the battery gets hot and I stopped the 30A test due to that.

Discharge 15.0A: Keppower IMR18650 NH1831 3120mAh (Black) 2016

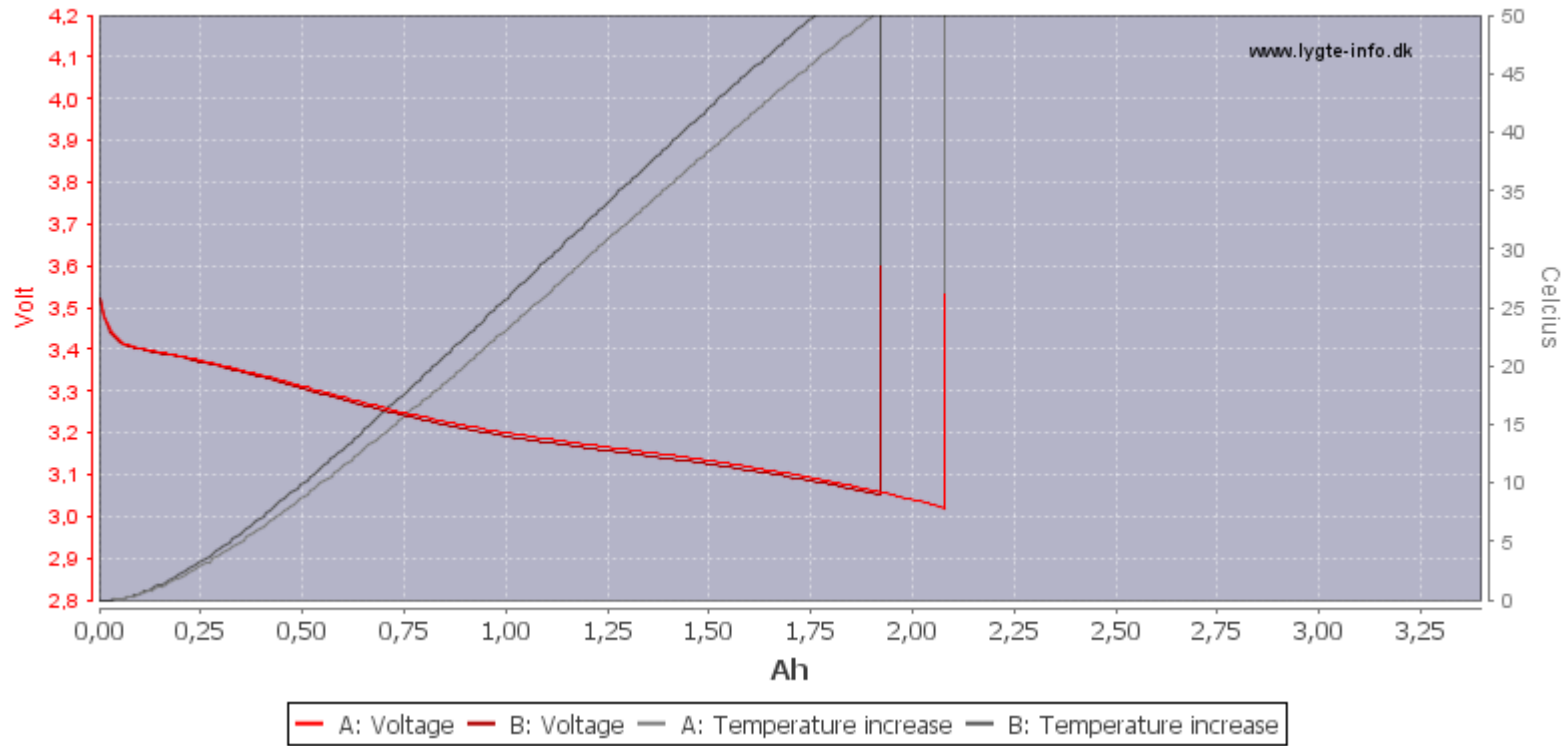


Discharge 20.0A: Keppower IMR18650 NH1831 3120mAh (Black) 2016



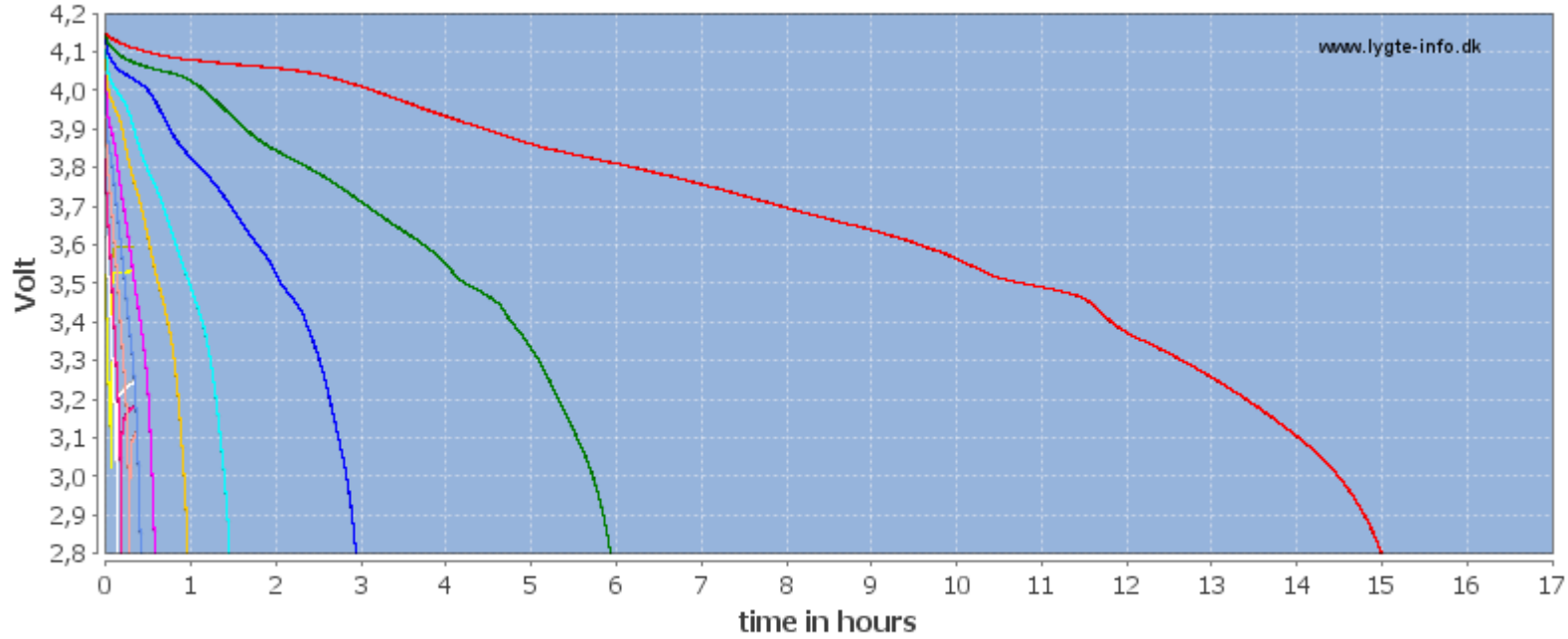
At 20A the cell gets rather hot, but it stayed just below 80°C

Discharge 30.0A: Keppower IMR18650 NH1831 3120mAh (Black) 2016



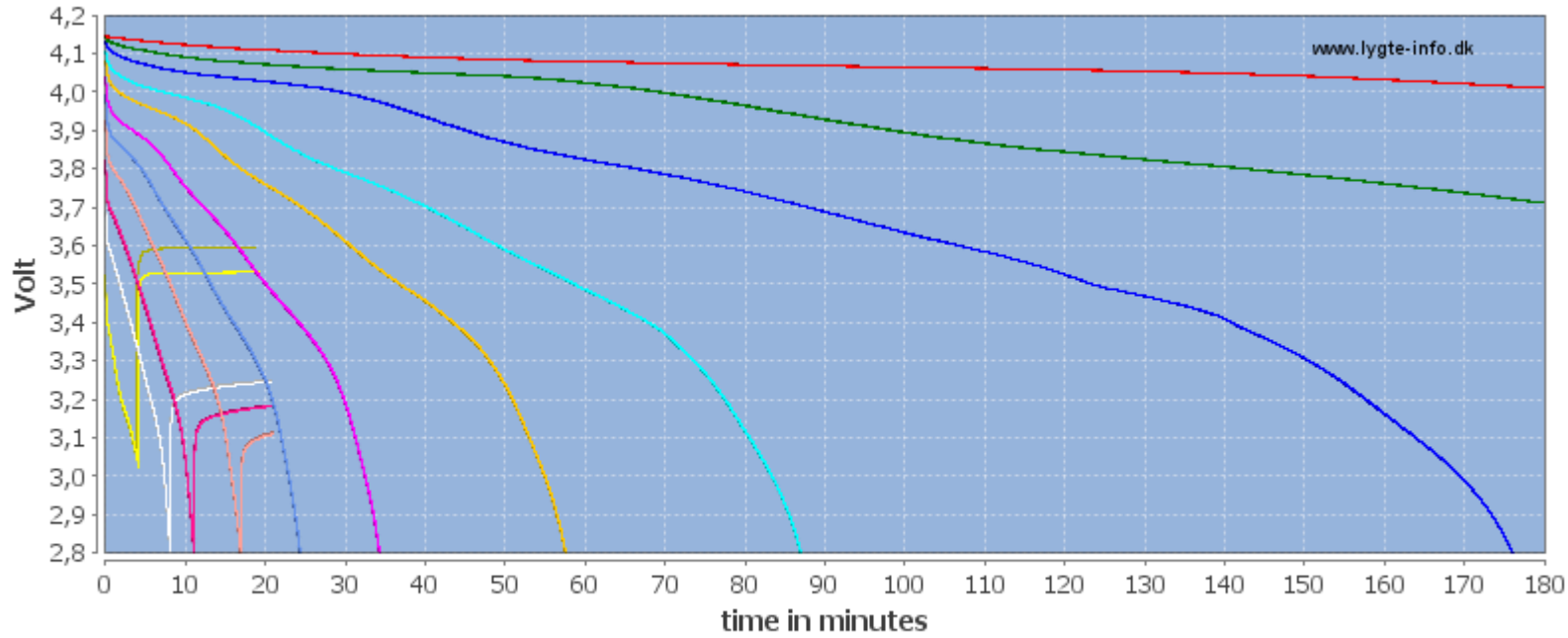
At 30A discharge the temperature reached 86°C, but first after I stopped at 80°C.

Discharge, time: Keppower IMR18650 NH1831 3120mAh (Black) 2016



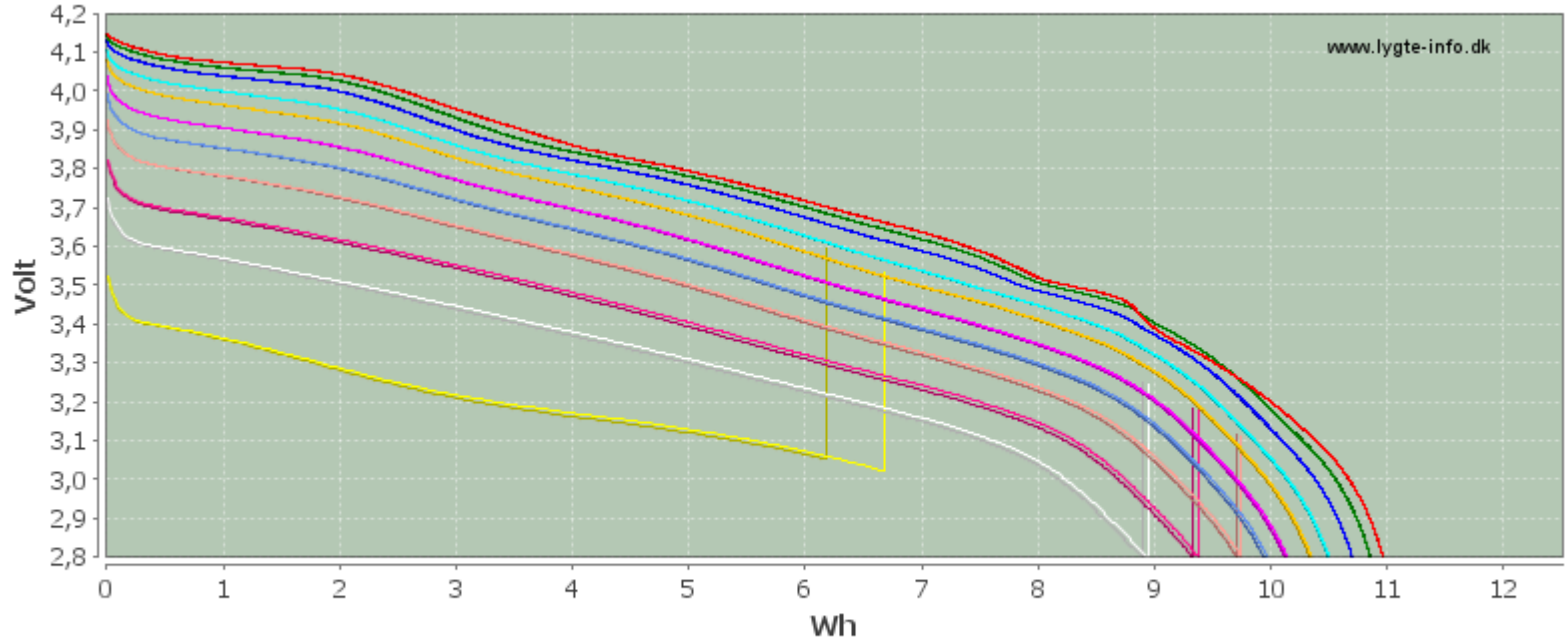
- | | | | | | | | | | | | |
|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|
| A:0.2A | B:0.2A | A:0.5A | B:0.5A | A:1.0A | B:1.0A | A:2.0A | B:2.0A | A:3.0A | B:3.0A | A:5.0A | B:5.0A |
| A:7.0A | B:7.0A | A:10.0A | B:10.0A | A:15.0A | B:15.0A | A:20.0A | B:20.0A | A:30.0A | B:30.0A | | |

Discharge, time: Keppower IMR18650 NH1831 3120mAh (Black) 2016



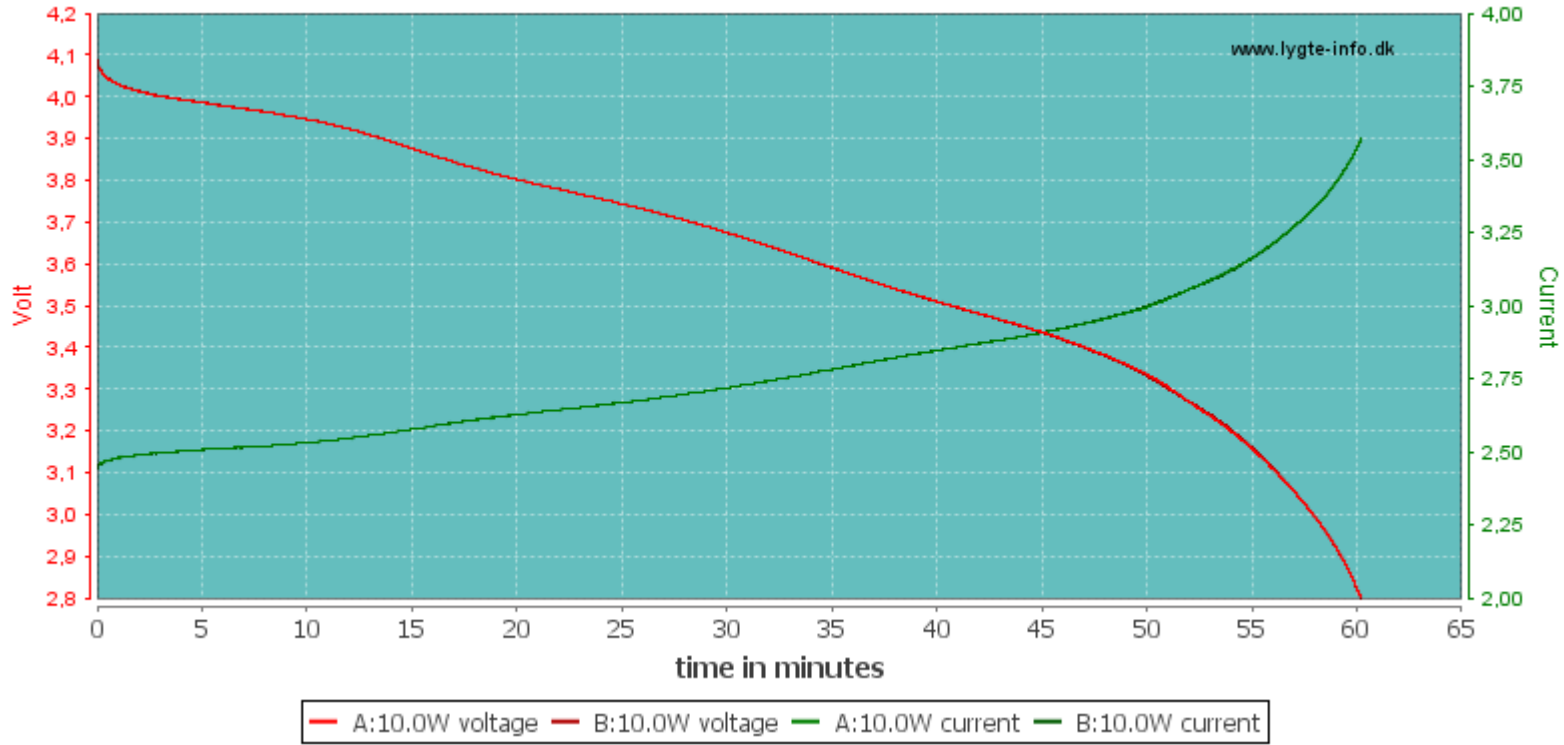
- A:0.2A B:0.2A A:0.5A B:0.5A A:1.0A B:1.0A A:2.0A B:2.0A A:3.0A B:3.0A A:5.0A B:5.0A
- A:7.0A B:7.0A A:10.0A B:10.0A A:15.0A B:15.0A A:20.0A B:20.0A A:30.0A B:30.0A

Discharge, energy: Keppower IMR18650 NH1831 3120mAh (Black) 2016

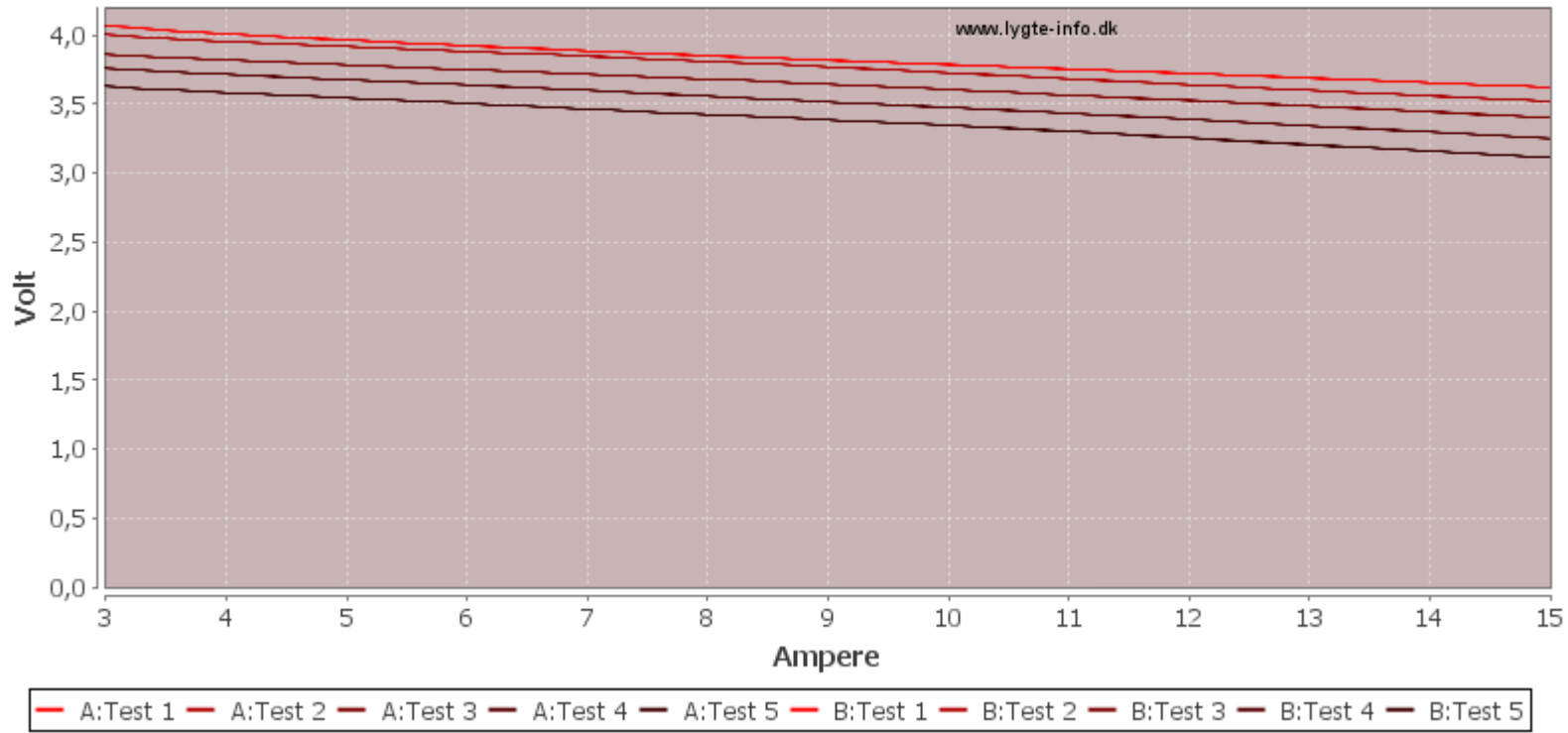


- A:0.2A B:0.2A A:0.5A B:0.5A A:1.0A B:1.0A A:2.0A B:2.0A A:3.0A B:3.0A A:5.0A B:5.0A
- A:7.0A B:7.0A A:10.0A B:10.0A A:15.0A B:15.0A A:20.0A B:20.0A A:30.0A B:30.0A

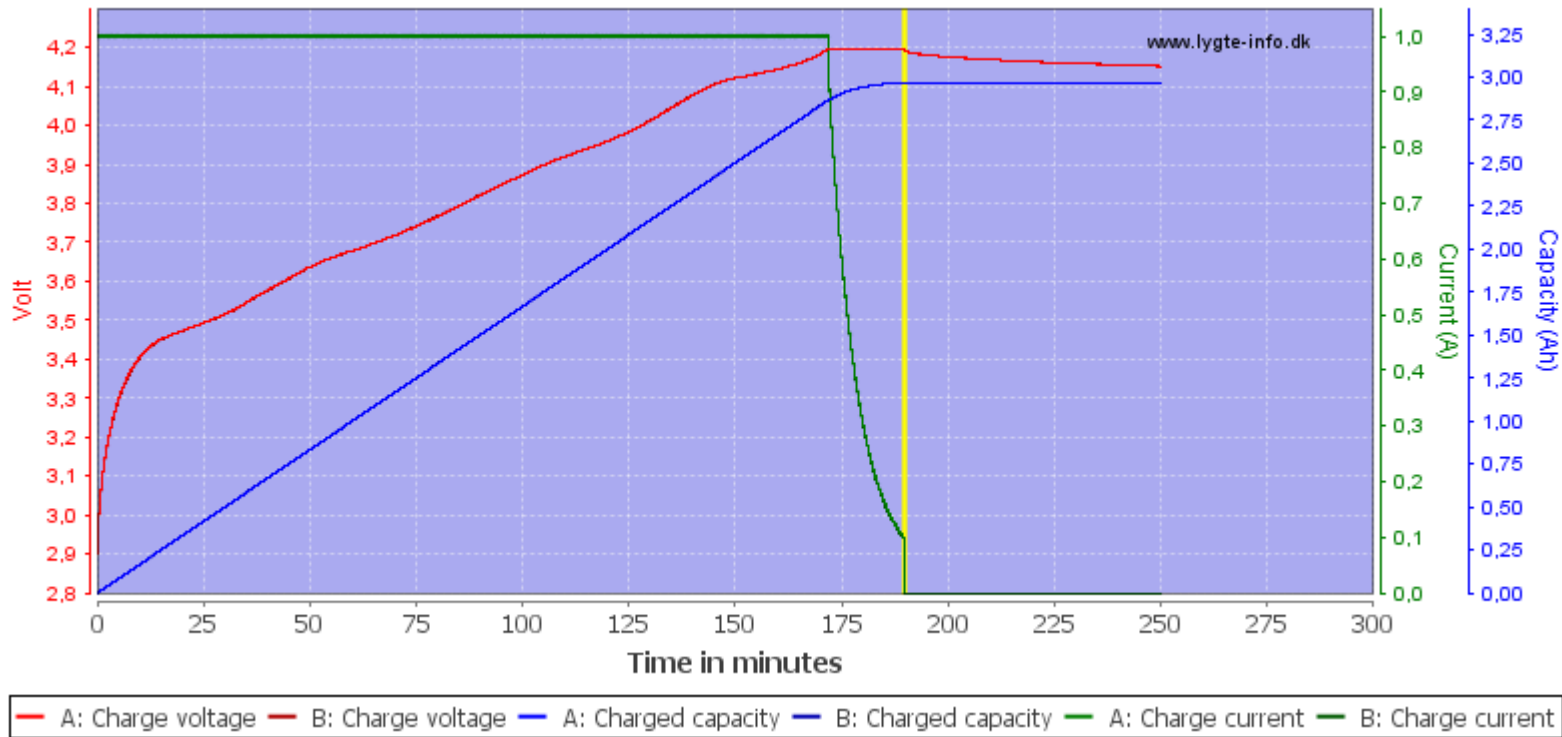
Discharge, power: Keppower IMR18650 NH1831 3120mAh (Black) 2016



Protection test: Keppower IMR18650 NH1831 3120mAh (Black) 2016



Charging: Keppower IMR18650 NH1831 3120mAh (Black) 2016



Conclusion

This is a very good high current battery, but 30A will need a temperature cutout to stay safe.

Notes and links

The batteries was supplied by Keppower for review.

[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](#)