

## Mooch

October 18 at 3:53am ·

Bench Test Results: iJoy 40A 3000mAh 20700 (4-“leg” version)...worse than 5-leg version, only 20A 2800mAh

Bottom Line: iJoy now has two versions of their “40A 3000mAh” 20700 battery, both in the same wrap. The original one has five “legs” coming down from the top contact and was rated at 30A 3000mAh by me.

This newer version of the “40A 3000mAh” battery has four “legs” coming down from the top contact. Unfortunately it is a hugely overrated, poor performing battery.

The voltage sag for this 4-leg cell version is a lot greater which results in about 30% less vaping time at moderate power levels (versus the 5-leg cell).

While both versions of this cell are on the market now, and using the same wrap, iJoy has stated that they will be using a different wrap soon for the 4-leg version. iJoy has also stated that the 4-leg version will not be sold separately in the future and will only be included in their kits. The 5-leg version will continue to be sold separately.

iJoy has also told me that they are working to lower the internal resistance of this cell. This will bring its performance closer to that of the 5-leg version. Once they release the updated 4-leg cell, with the new wraps, I will retest them.

The white top ring insulator of this cell is card stock, i.e., paper, like the 5-leg version. It is quite thin though. Pay extra attention to the top of these cells if your charger is a tight fit or your mod damages cell wraps.

I am rating this version of this iJoy cell at 20A and 2800mAh. Its maximum vaping amps (MVA) limit is 25A, limited by voltage sag.

The diameter of the 4-leg version ranged from 20.42mm - 20.49mm. This includes the distinct bumps at the seams of the wrap. Four cells were measured.

The diameter of the 5-leg version ranged from 20.42mm to 20.48mm with five cells being measured. The 4-leg and 5-leg versions are essentially the same size.

A note...the capacity rating of the 5-leg version will also be lowered by me (probably from 3000mAh to 2800mAh) as additional experience with these cells, and other 2x700's with their different chemistry, has made me realize this change is needed. This will affect the Efest, EBAT, and Ampking 20700's too as they also use the 5-leg version of this cell. Their performance has not changed, just the rating I am giving them. More info in another post.

Several 4-leg cells were tested. I want to thank those who arranged to get samples of them to me, especially Evolution Vaping in the U.K. They expressed shipped cells to me here in New York City not once but twice after I realized I needed more cells to test. Thank you all!

Cell photos: <https://imgur.com/a/735dC>

Ratings Graphic: <https://imgur.com/a/hXsxd>

Test results, discharge graph, photos: <https://www.e-cigarette-forum.com/.../bench-test-results-ijoy...-leg-version-only-20a-28.833915/#post-20144551>

All my test results to date: <https://www.e-cigarette-forum.com/.../list-of-battery-tests.../>

iJoy 40A 3000mAh 20700 (4-leg version)...only a 20A 2800mAh battery

Posted by Mooch on October 18, 2017



Original 5-leg version

Newer 4-leg version

Posted by Mooch on Oct 17, 2017

Capacity Rating		Current Ratings and Max Vaping Amps Limit		
Claimed	Actual	Claimed	Actual CDR	MVA Limit
3000mAh	2800mAh	40A	20A	25A

MVA Limit = The maximum pulsed current you can draw when vaping without exceeding my 100°C safety limit in case the battery is discharged continuously due to a mod malfunction or accidental button press. Much higher than this and you risk the battery venting or worse in case of a problem. You can exceed this rating when vaping without overheating but you increase the risk of battery venting in case of a problem.

THIS CANNOT BE USED AS THE BATTERY'S CURRENT RATING!  
See the Continuous Discharge Rating (CDR) for that.

For more information check the pinned post on my Mooch Facebook page  
Test Report: <http://bit.ly/2yx0VRw>

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