**Li-ion (only search in stock 18650 battery shop)-benchmarking and search**

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**Samsung 25R 18650 2500mAh 20A Battery:**

Store link: <https://www.18650batterystore.com/products/samsung-25r-18650?utm_campaign=859501437&utm_source=g_c&utm_medium=cpc&utm_content=201043132925&utm_term=_&adgroupid=43081474946&gclid=CjwKCAjwz5iMBhAEEiwAMEAwGENIbee6HGlxKBkd5BiXdVwadWqBgftd1sJ_ldvjpJIhyCGncig0zxoCmAcQAvD_BwE>

Datasheet:

<https://cdn.shopify.com/s/files/1/0481/9678/0183/files/samsung_25r_data_sheet.pdf?v=1605015771>

14s12p for 58.8V and 30Ah a total of 168cells @ 5.25/cell (100+order) = $882(Expensive)

Notes: Pack is perfect for our purposes but expensive

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# **Molicel P26A 18650 2600mAh 25A Battery:**

Store link:  
<https://www.18650batterystore.com/collections/18650-batteries/products/molicel-p26a?_pos=6&_fid=dc55e27e4&_ss=c>

Datasheet:

<https://cdn.shopify.com/s/files/1/0481/9678/0183/files/molicel_p26a.pdf?v=1605879122>

14s12p for 58.8V and 31.2Ah a total of 168cells @ 3.55/cell (100+order) = $596(Expensive)

Notes: Pack is perfect for our purposes but expensive-less so than samsung

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For Li-ion(14sNp)

It is now I realize to make this pack we will need MOH POWEH so to do this we will use cells that can handle a TON of current so I will be pursuing this avenue from here on out, the launch is only ~3 mins for pack 1 and 7 for pack 2 so hopefully we can beat these batteries up a little bit for the weight savings

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# **Molicel 21700 P42A 4200mAh 45A Battery:**

Store link:  
<https://www.18650batterystore.com/products/molicel-p42a?_pos=1&_sid=ff008a6b1&_ss=r>

Datasheet:

<https://www.imrbatteries.com/content/molicel_p42a.pdf>

Two configurations possible:

1. Power Delivery

14s5p for 58.8V and 21Ah a total of 70cells @ 4.94/cell (50+order) = $345.80 Least expensive so far

1. Power and Energy Delivery

14s7p for 58.8V and 29.5Ah a total of 98+2(savings on bulk)cells @ 4.84/cell (100+order) = $474.32(Expensive)

Notes: can we cut the total energy of the pack by ⅓ ?

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**LiFePO4**

IMPORTSNT NOTE: Will only need 100s of operation out of this pack , we can push the batteries hard.

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# ANR26650M1-B, LithiumWerks Nanophosphate® 3.3V 2.5Ah Lithium Iron Phosphate Battery

Store link:  
<https://a123batteries.com/anr26650m1-b-lithiumwerks-nanophosphate-3-3v-2-5ah-lithium-iron-phosphate-battery/>

Datasheet:

<https://a123batteries.com/product_images/uploaded_images/26650.pdf>

17s4p for 61.2V and 10Ah a total of 68cells @ 6.00/cell (29+order) = $408

420A for 10s at 48C rate or 200A continuous at 20C rate

Notes: Using matlab plot 300A would be about 27C rate, probably handleable for 60s will need to test.

(for testing 21s2p)-for LiFePO4