



## Battery Engineering

Author: Prof. Dr. Priscilla Caliandro

### Exercise 2 - Determination of LIB performances based on datasheet

1. Looking at the following [datasheet](#) try to answer to those questions:

- a) What is the nominal voltage?
- b) How is the nominal voltage defined and why do we need it for sizing?
- c) What is the capacity (Ah) of the battery cells?
- d) There are two ways of computing the battery capacity based on the available data on the datasheet. Could you indicate another way with respect the one you used in point c?
- e) According to you, why on the datasheet the producer indicates two energy values? Nominal and Minimum?
- f) What energy will you achieve if you connect 7 cells in parallel and 13 cells in series (7p13s)?
- g) What power can be achieved by running the battery module defined in point f with 2Crate?
- h) Considering the value of pulse power in 4.2.8 at which current you can run the battery to achieve the peak power of 80W? Is it possible to use this current in continuous mode?
- i) Why does the capacity of the cell decrease with decreasing temperature?