

**Datasheet for #sbcw647 DN**Recommendations:

Please read the starter kit user manual (at least installation chapter 5), if available, and have a look at the FAQ at <http://www.alpeslasers.ch/alfaq.pdf>

**WARNING:** Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

**WARNING:** Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To use with a power-supply ILX Lightwave LDX-3232 or equivalent.

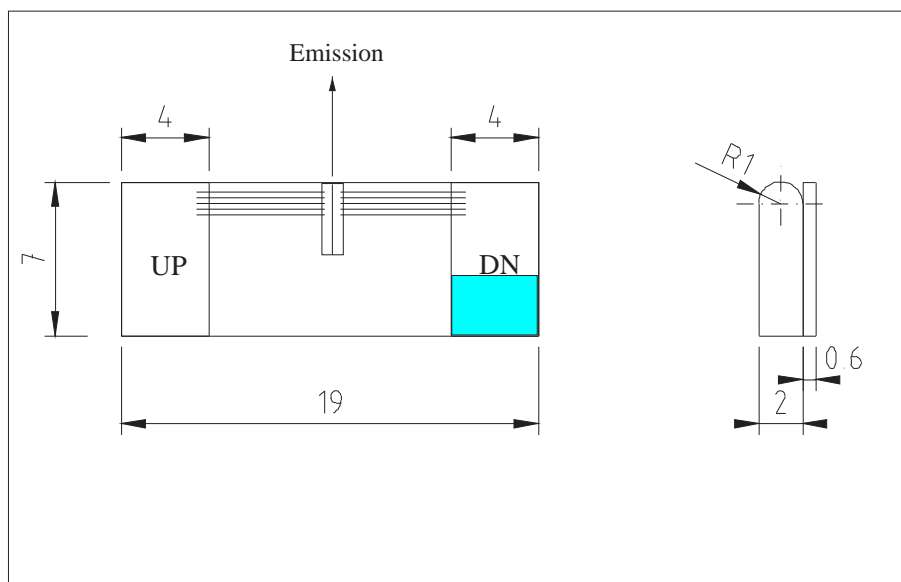


Figure 1: Support mounting for #sbcw647 DN (please note that the laser is connected to the DN pad drawn in blue)

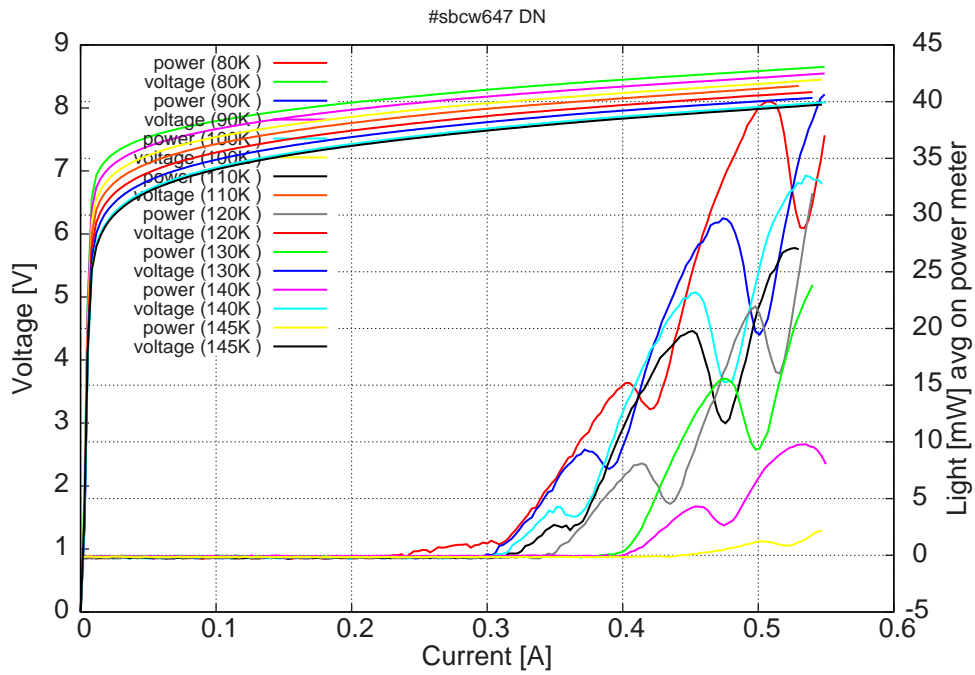


Figure 2: peak voltage and average power vs peak current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 80K:  $I_{th}=230\text{mA}$  /  $V_{th}= 8.14\text{V}$  (4-wires measurements)

Maximum operation current: 0.55A at 80K, 0.53A at 90K, 0.5A at 100K, 0.46A between 110K and 140K.

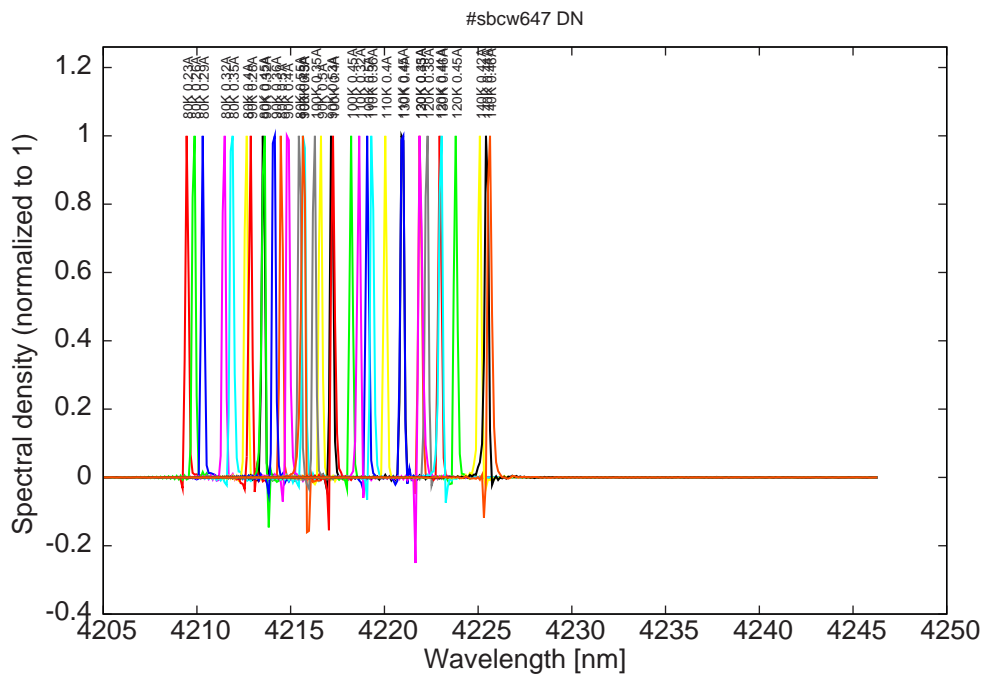


Figure 3: spectra at 80K, 90K, 100K, 110K, 120K, 130K and 140K

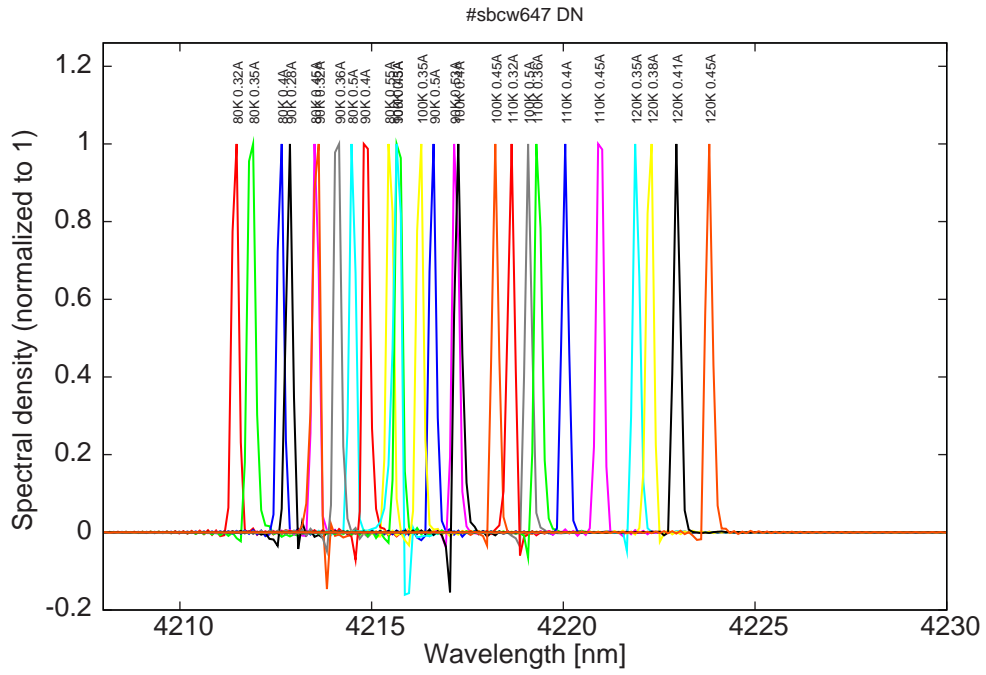


Figure 4: spectra at 80K, 90K, 100K, 110K and 120K (usable monomode range)

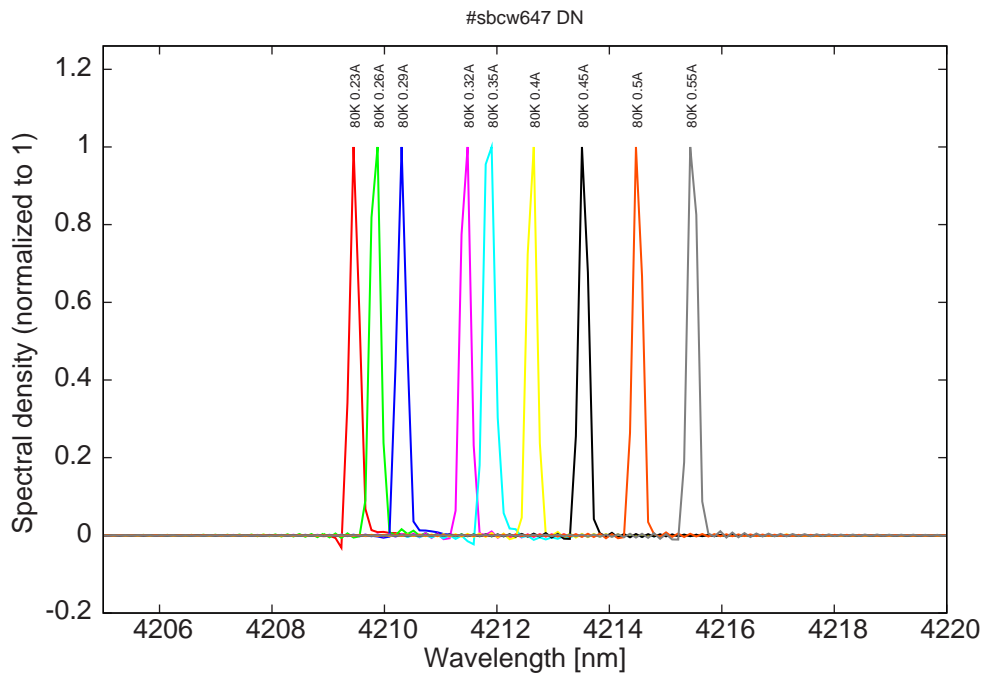


Figure 5: spectra at 80K (all spectra), note: mode jumping around 300mA

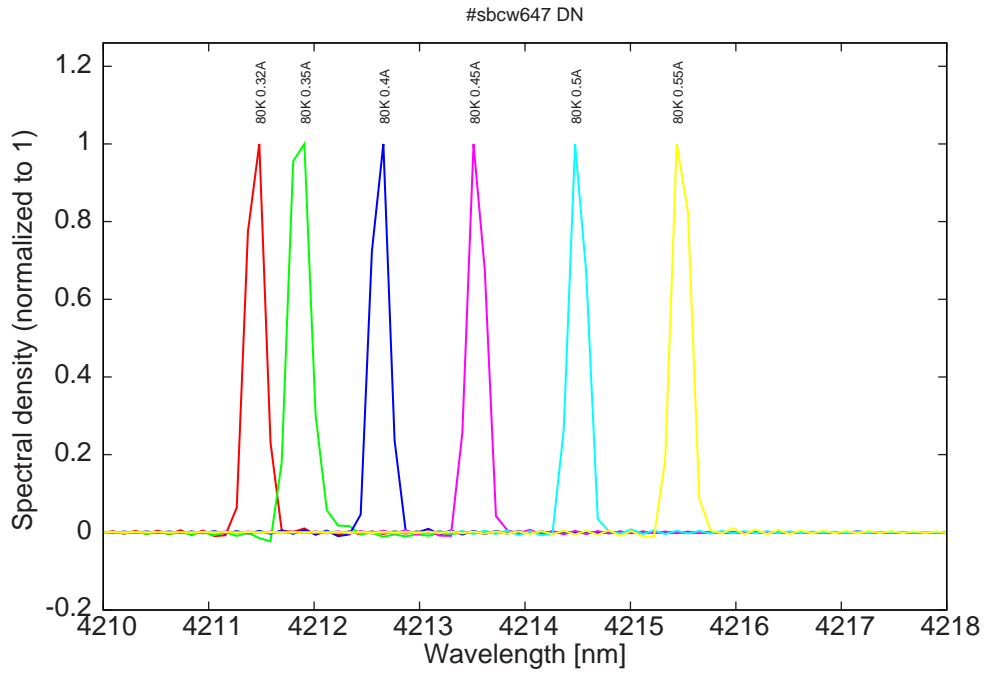


Figure 6: spectra at 80K after mode jumping

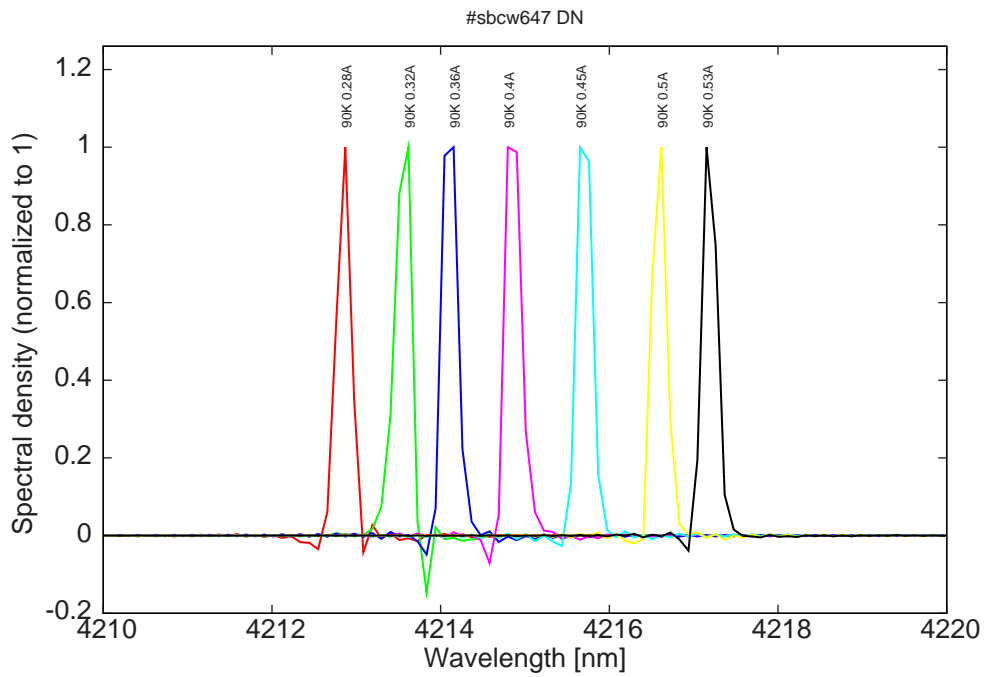


Figure 7: spectra at 90K

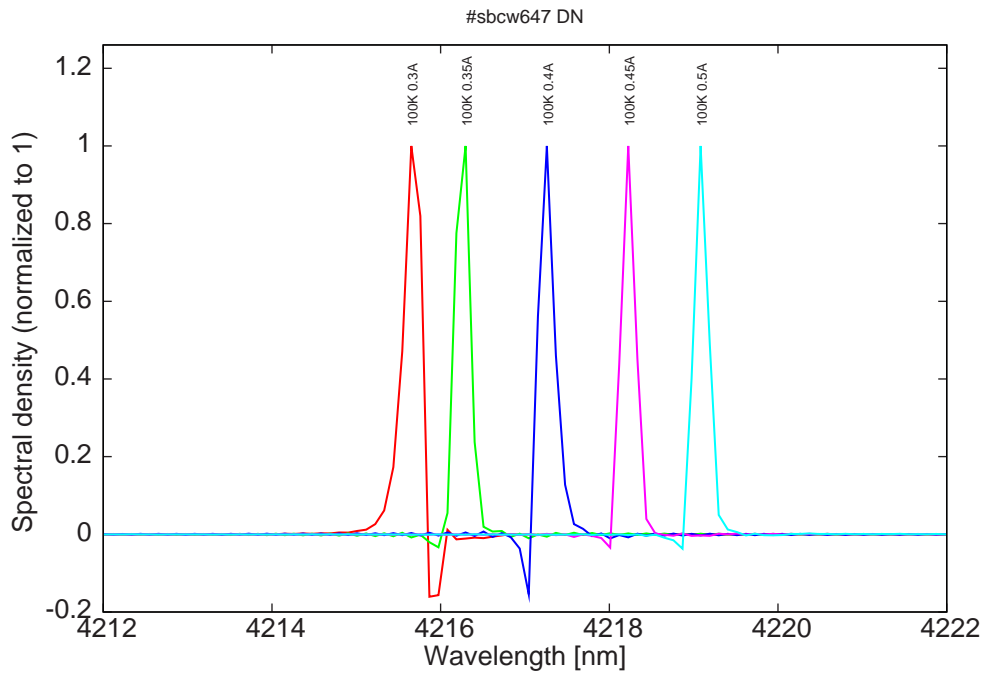


Figure 8: spectra at 100K

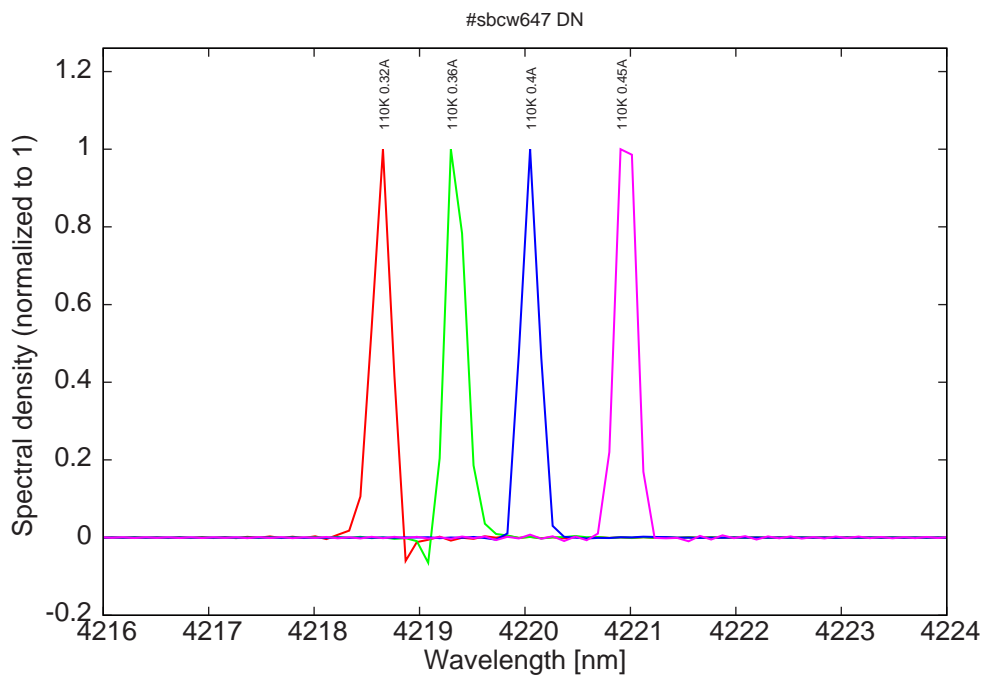


Figure 9: spectra at 110K

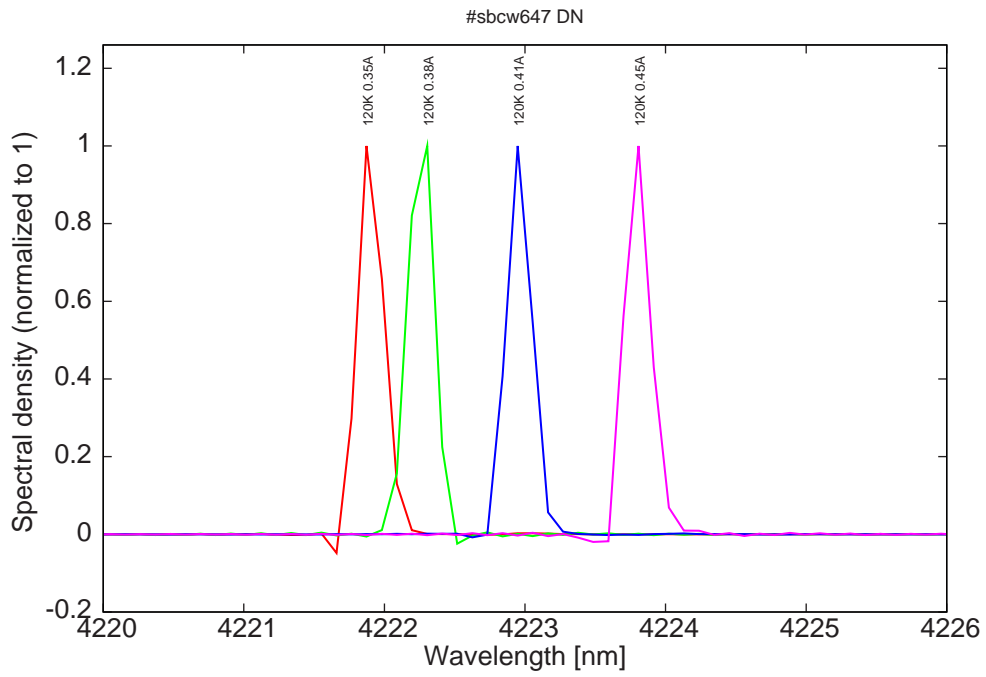


Figure 10: spectra at 120K

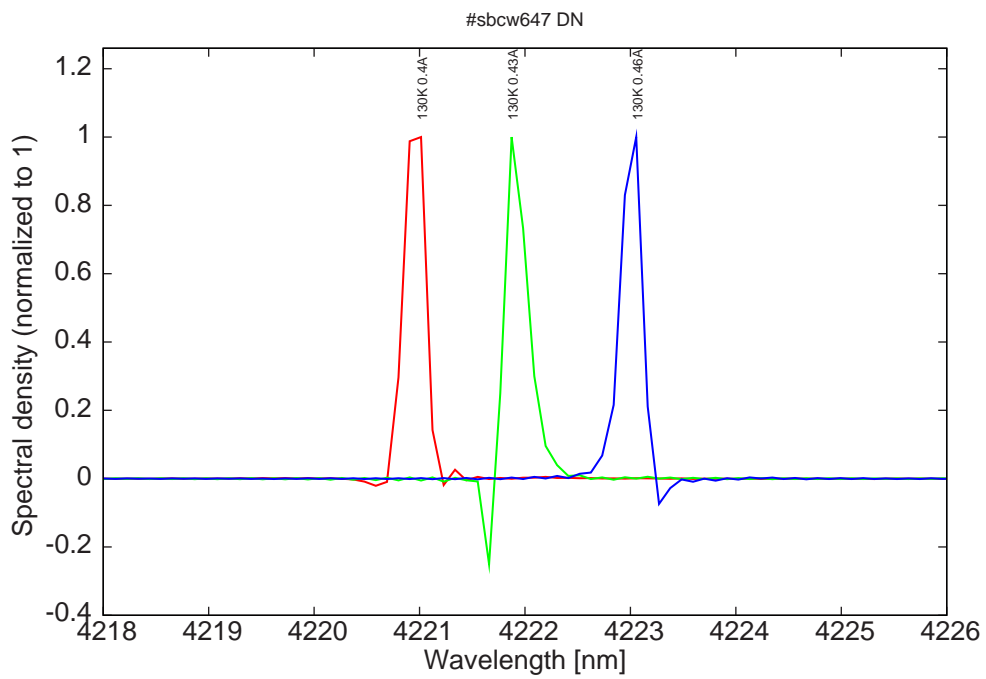


Figure 11: spectra at 130K (mode jumping compared to spectra at 120K)

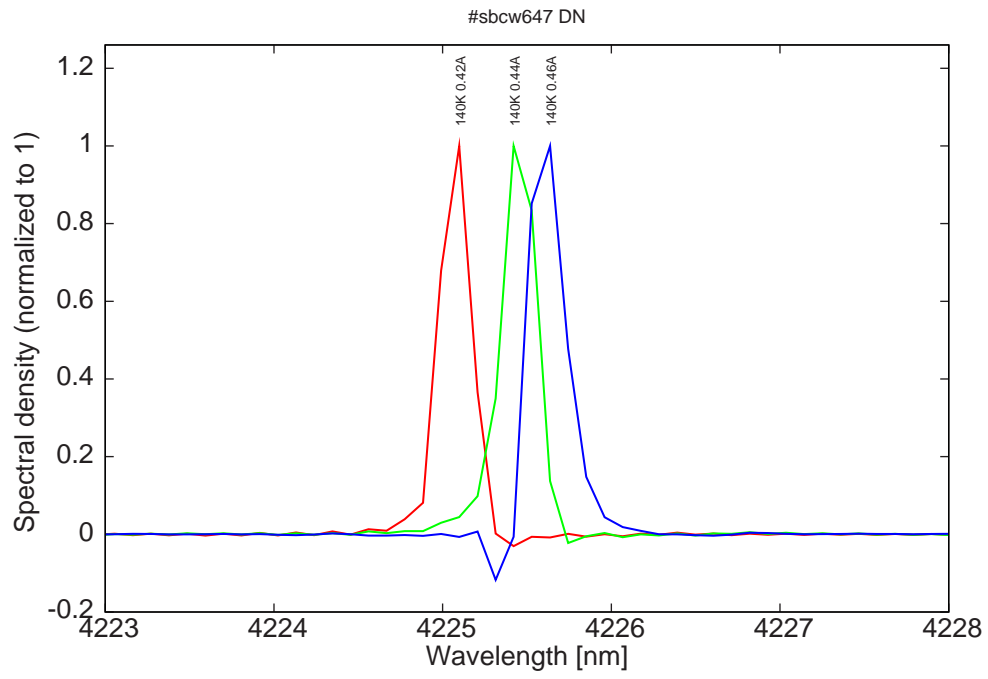


Figure 12: spectra at 140K (follow the spectra at 130K)