

Datasheet for #sbcw649 DNRecommendations:

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.

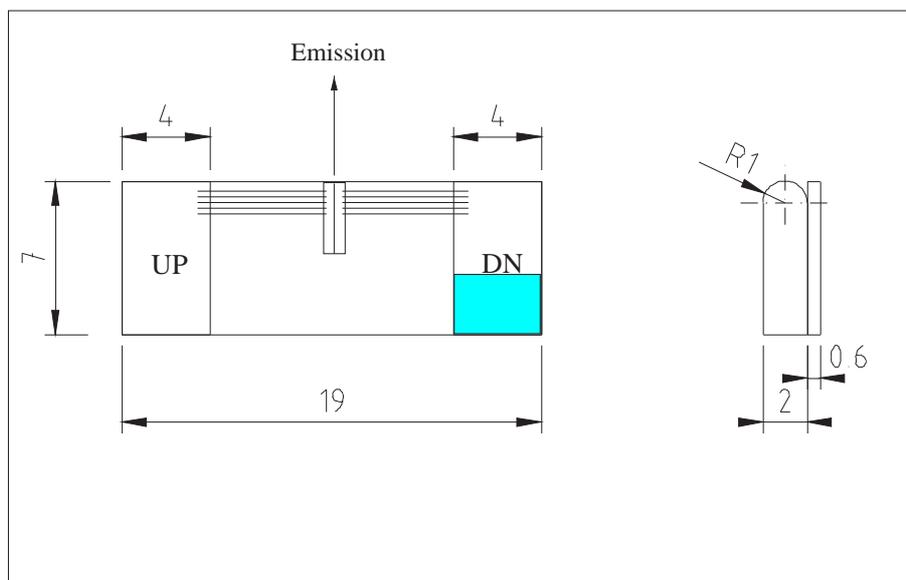


Figure 1: Support mounting for #sbcw649 DN (please note that the laser is connected to the DN pad drawn in blue)

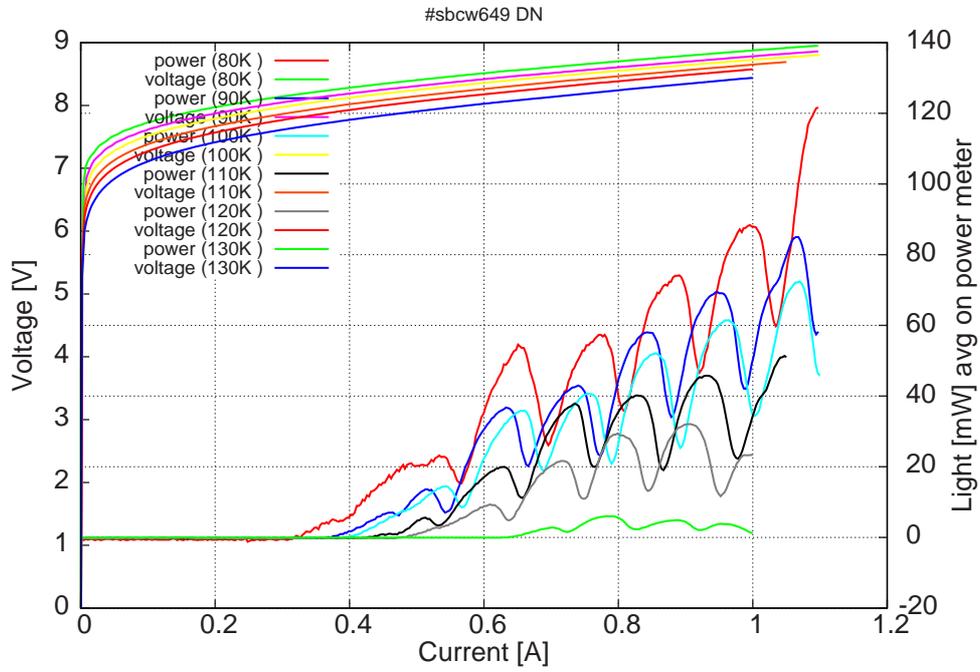


Figure 2: peak voltage and average power vs peak current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

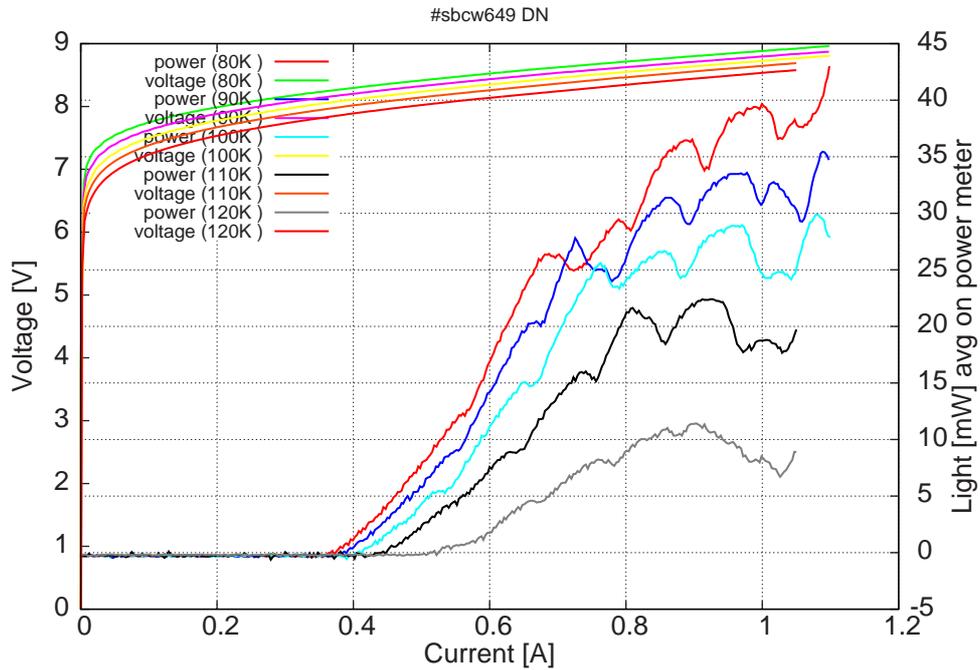


Figure 3: peak voltage and average power vs peak current in continuous-wave operation directly in front of the cryostat (no air-absorption) (the solid squares indicate the maximum singlemode emitted power)

Note: at 80K: $I_{th}=300\text{mA}$ / $V_{th}= 8.14\text{V}$ (4-wires measurements)
 Maximum operation current: 1.05A at 80K and 90K, 1.0A at 100K.

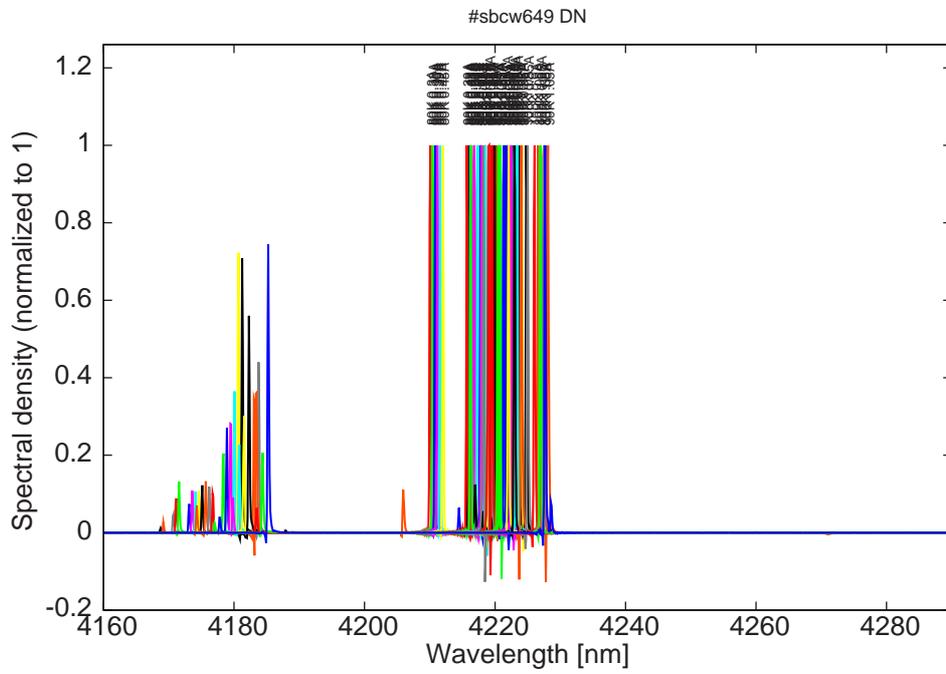


Figure 4: spectra at 80K, 90K and 100K

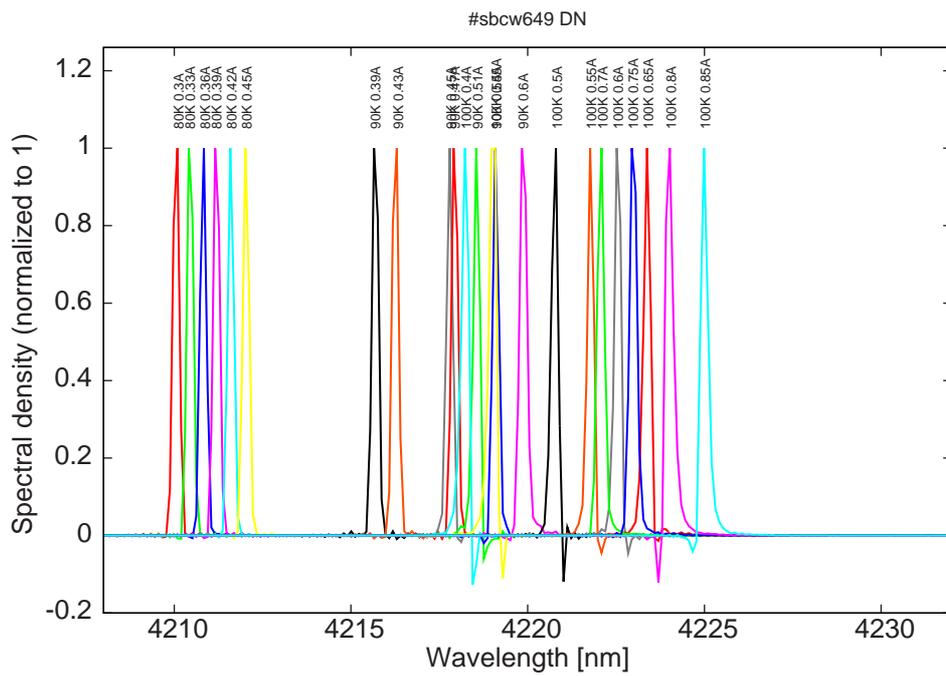


Figure 5: spectra at 80K, 90K and 100K (usable monomode range)

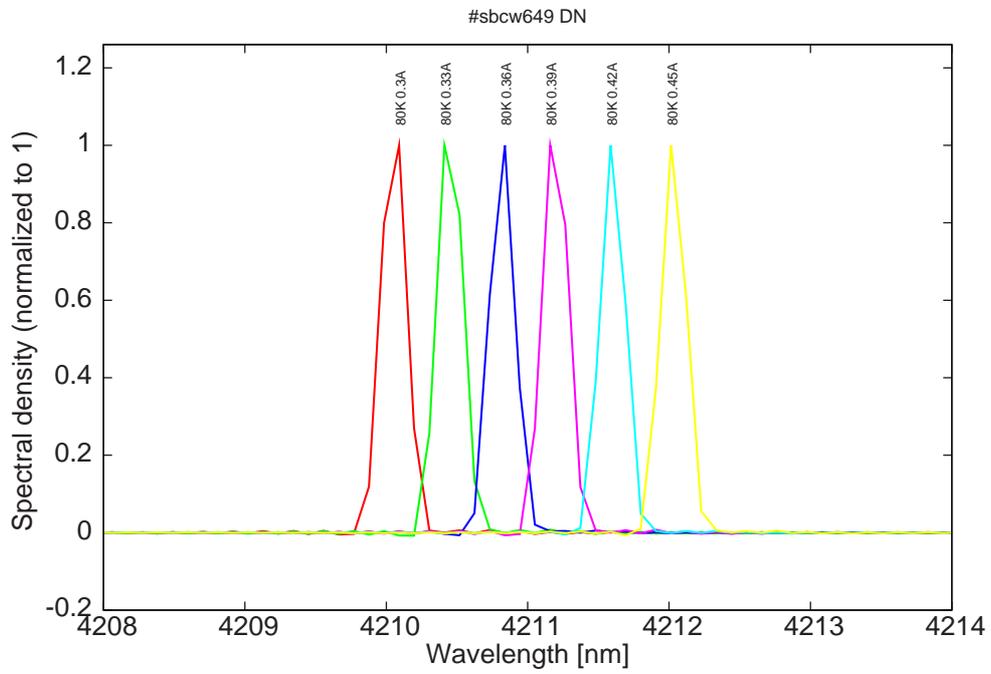


Figure 6: spectra at 80K (monomode range)

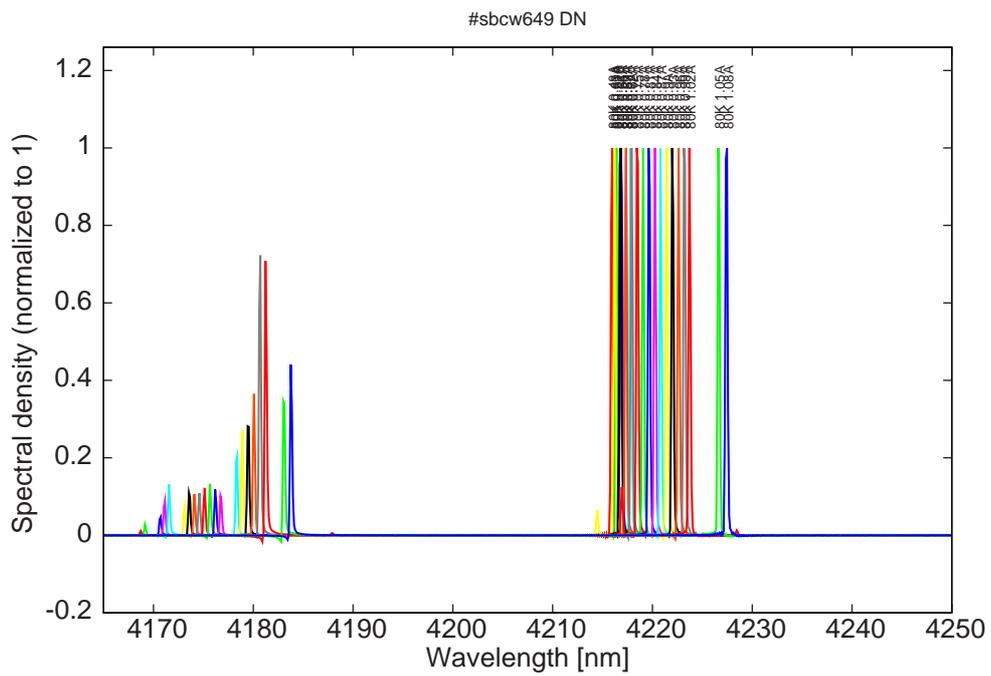


Figure 7: spectra at 80K (others)

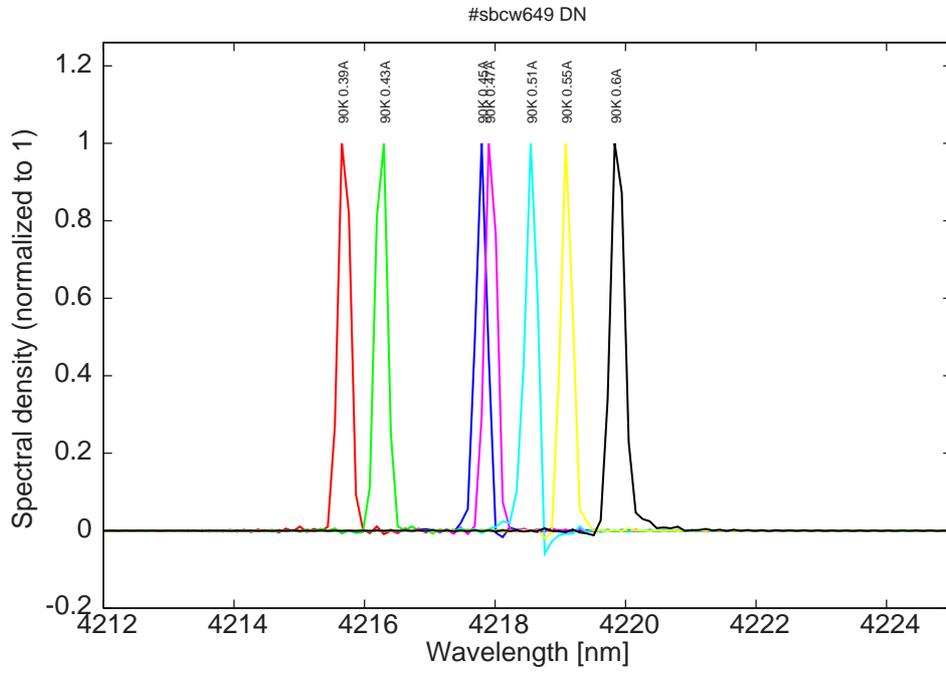


Figure 8: spectra at 90K (monomode range), note: mode jumping around 440mA

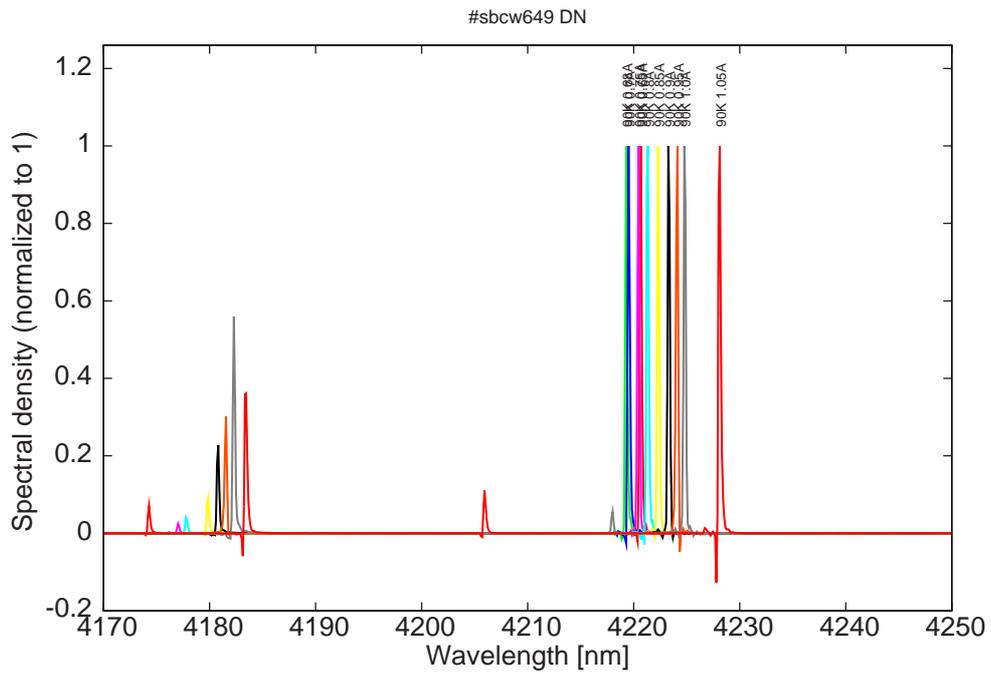


Figure 9: spectra at 90K (others)

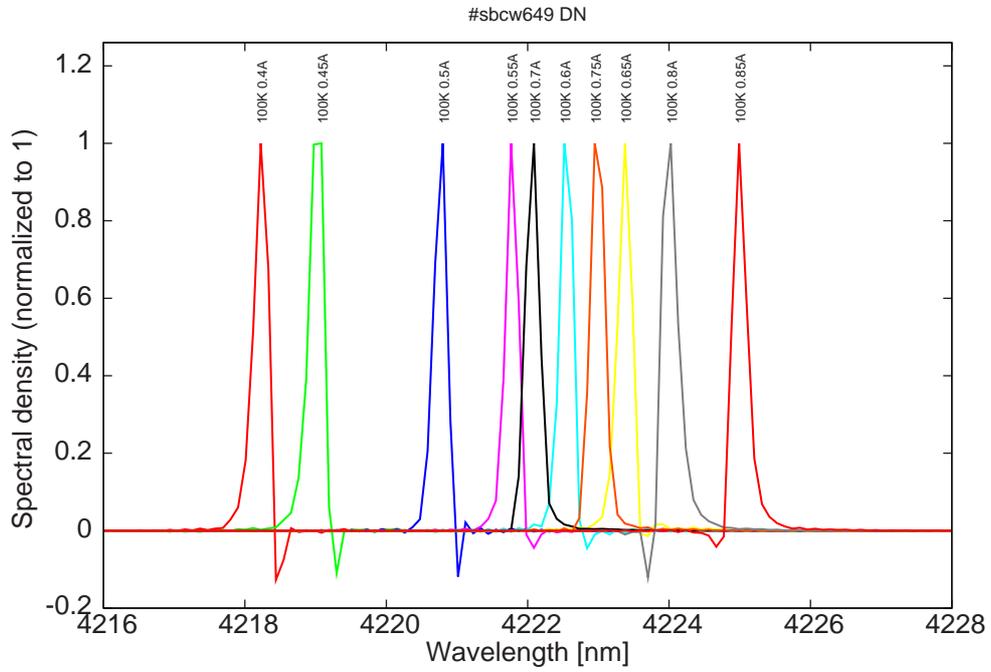


Figure 10: spectra at 100K (monomode range), note: mode jumping around 470mA and 680mA

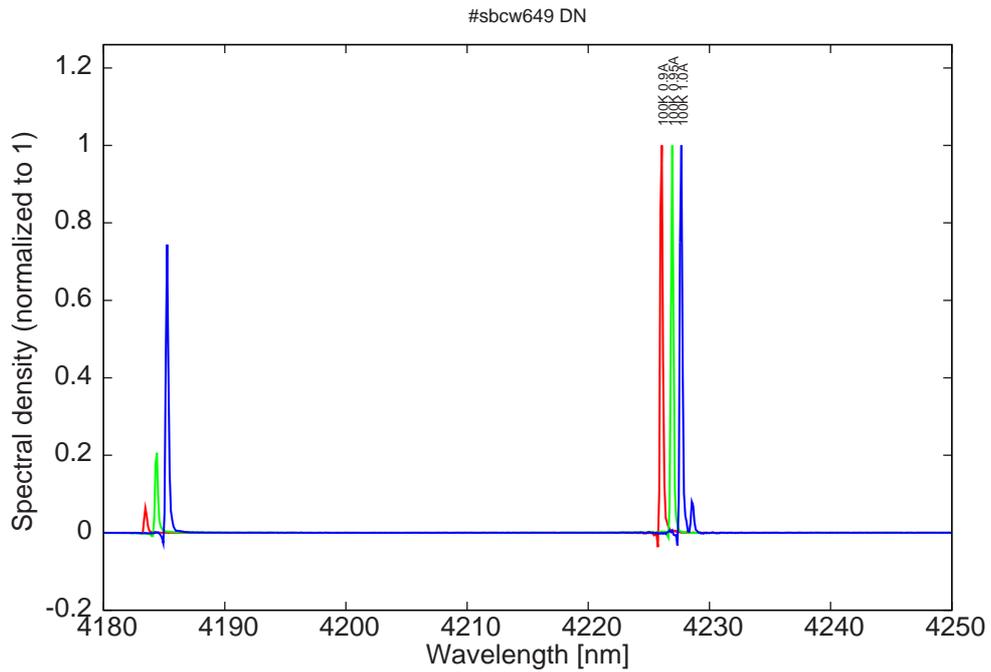


Figure 11: spectra at 100K (others)