Quantum Cascade Solutions
Passage Max.-Meuron 1-3 CH-2000 Neuchâtel Tel: +41 32 729 95 10
Case Postale 1766 Switzerland Fax: +41 32 721 36 19

Datasheet for #sb101

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 longer pulses, shorter period, or higher voltage or current than specified in this document may cause damage and will result in loss of warranty, unless agreed upon with Alpes Lasers!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative bias on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive bias on the base contact (= submount, corresponding to the label "base" on the LLH).

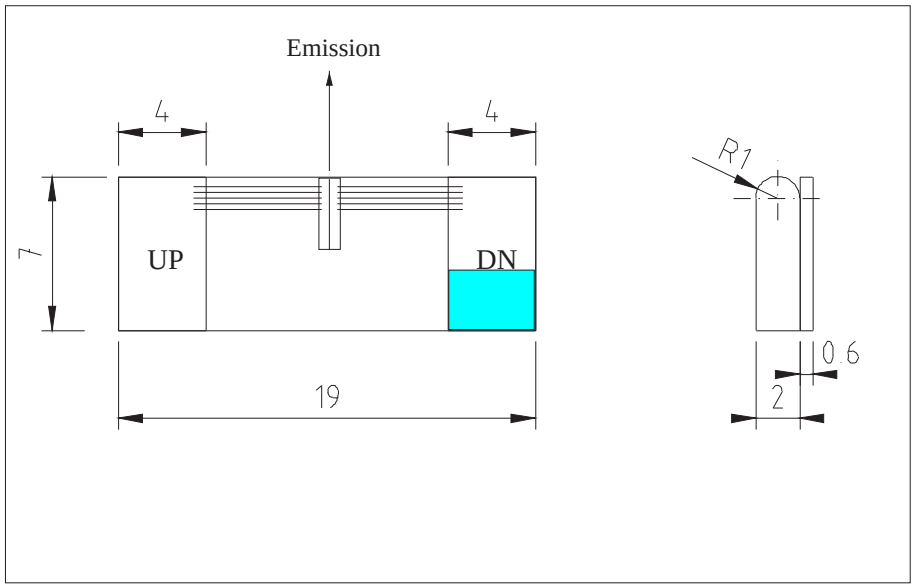

Figure 1: Support mounting for #sb101 (please note that the laser is connected to the DN pad drawned in blue)

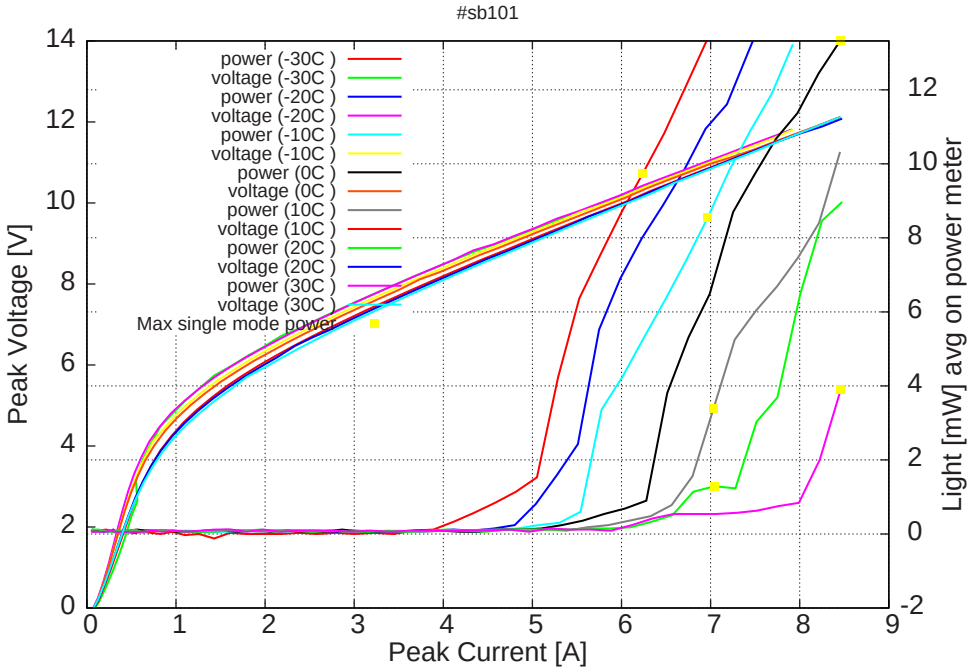

Figure 2: peak voltage and avg power vs peak current (the solid squares indicate the maximum singlemode emitted power)

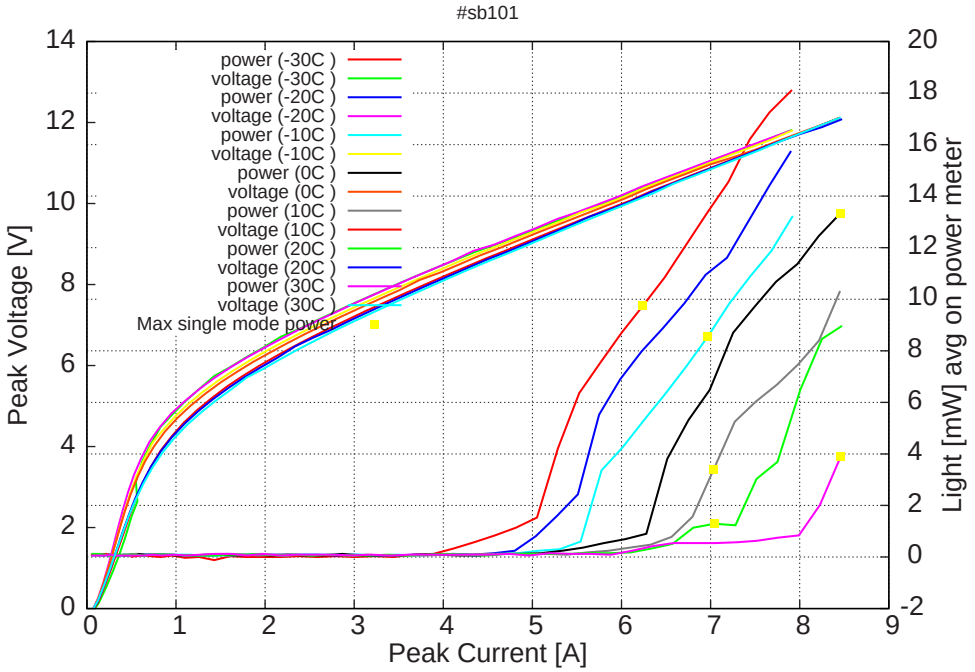

Figure 3: peak voltage and avg power vs peak current (including the multimode region)

Note: data taken with 50ns pulses, 2.5μs period.

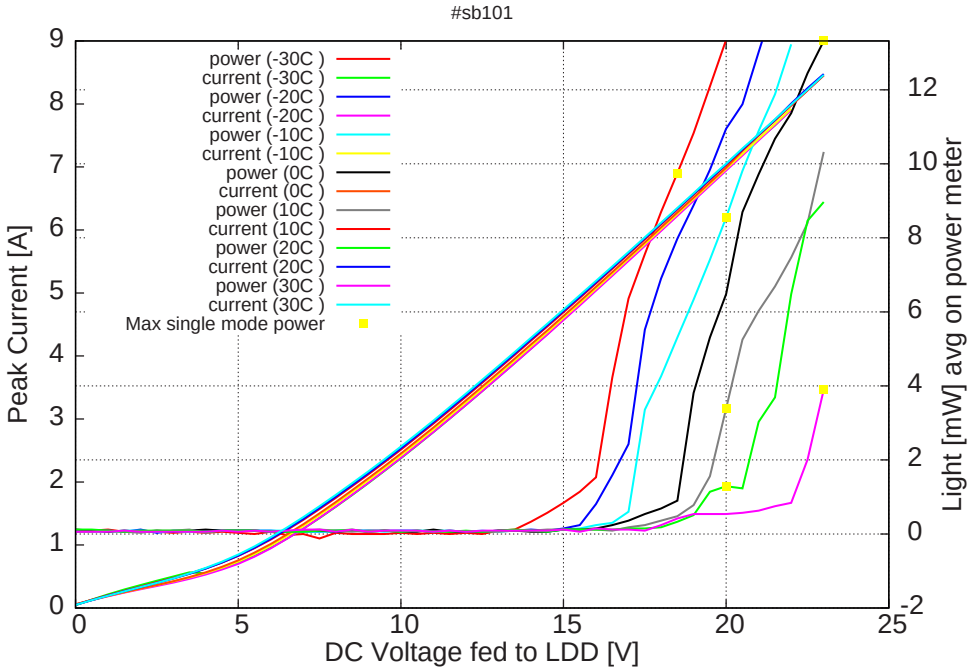

Figure 4: peak current and avg power vs LDD voltage (the solid squares indicate the maximum singlemode emitted power)

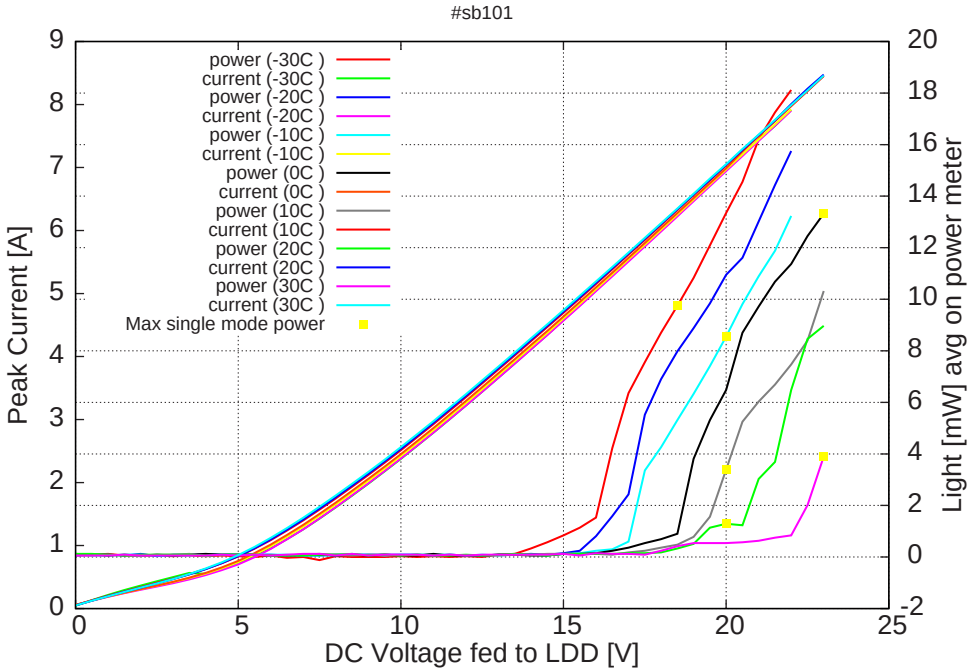

Figure 5: peak current and avg power vs LDD voltage (including the multimode region)

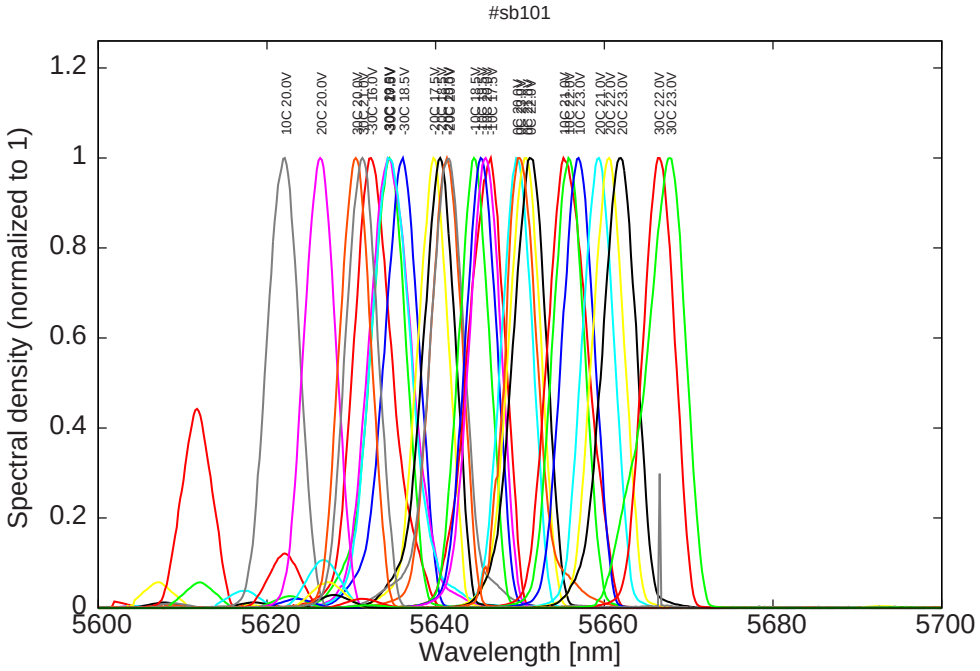

Figure 6: spectra from -30C to 30C for various LDD voltages

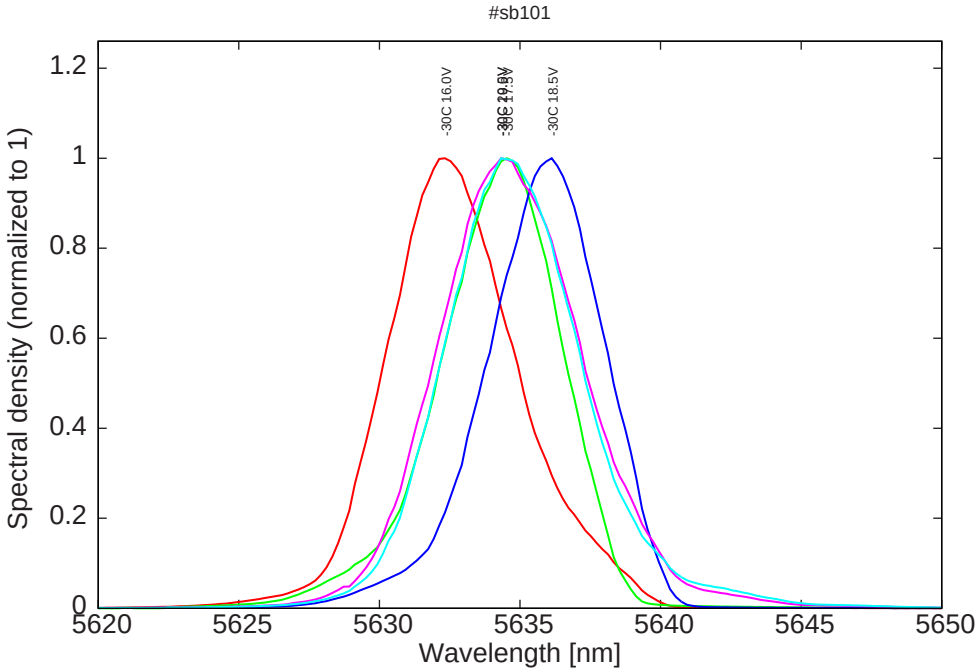

Figure 7: spectra at -30C for various LDD voltages (mode jumping at 19.5V)

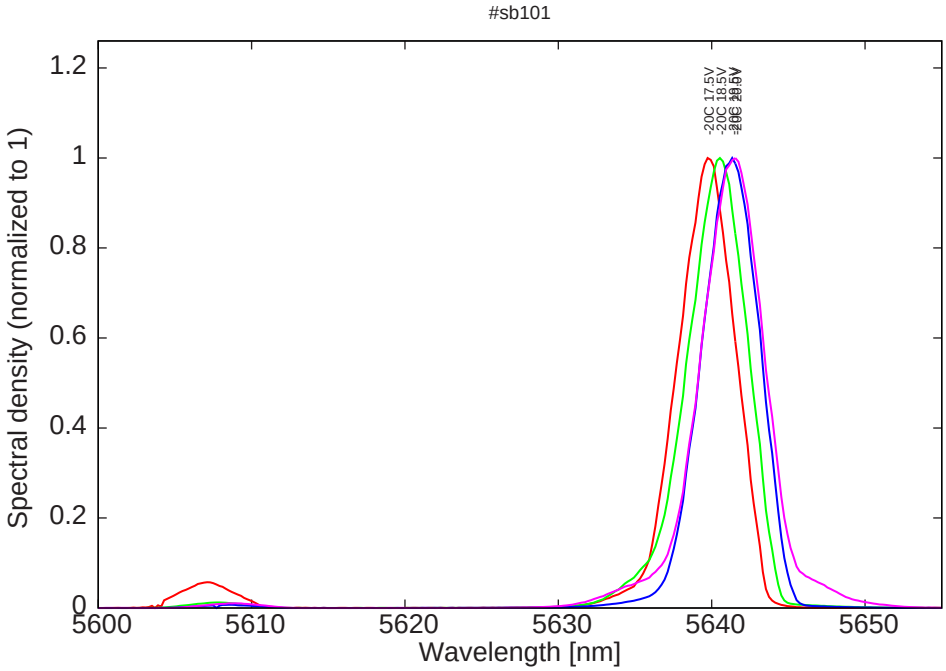

Figure 8: spectra at -20C for various LDD voltages (bimode)

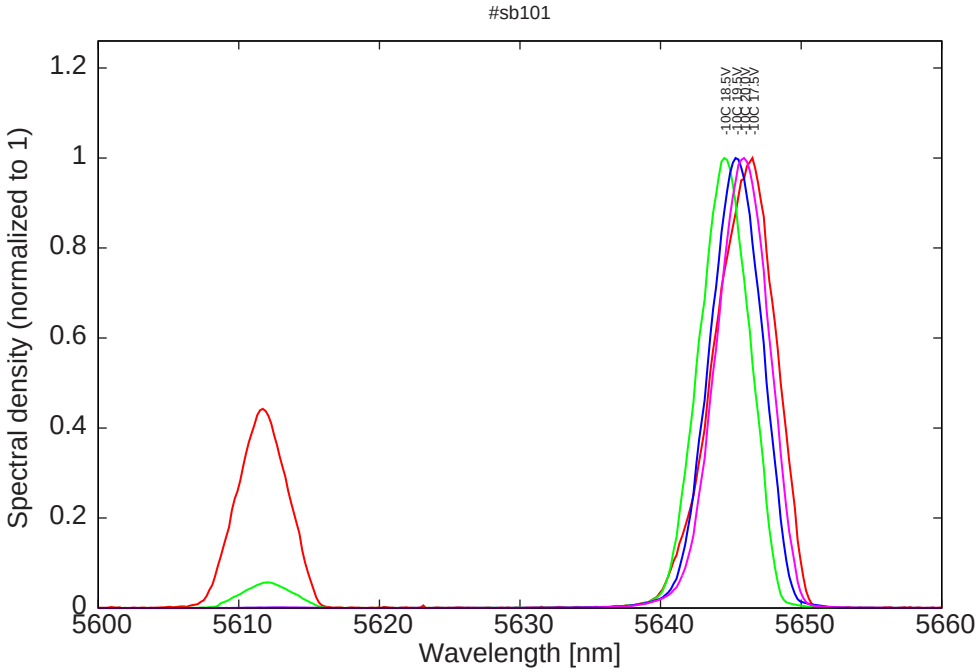

Figure 9: spectra at -10C for various LDD voltages

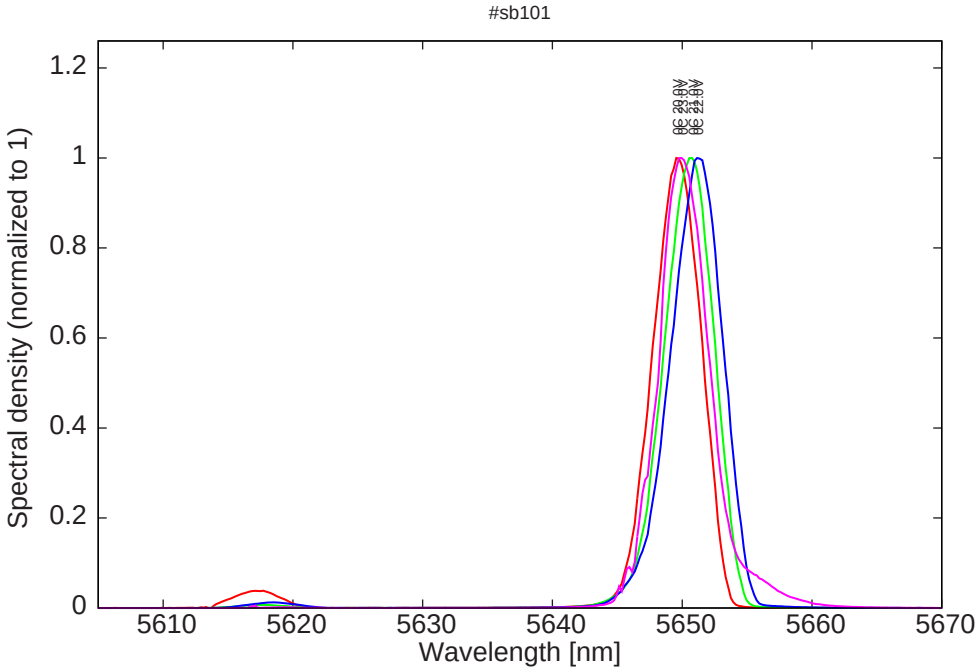

Figure 10: spectra at 0C for various LDD voltages (bimode)

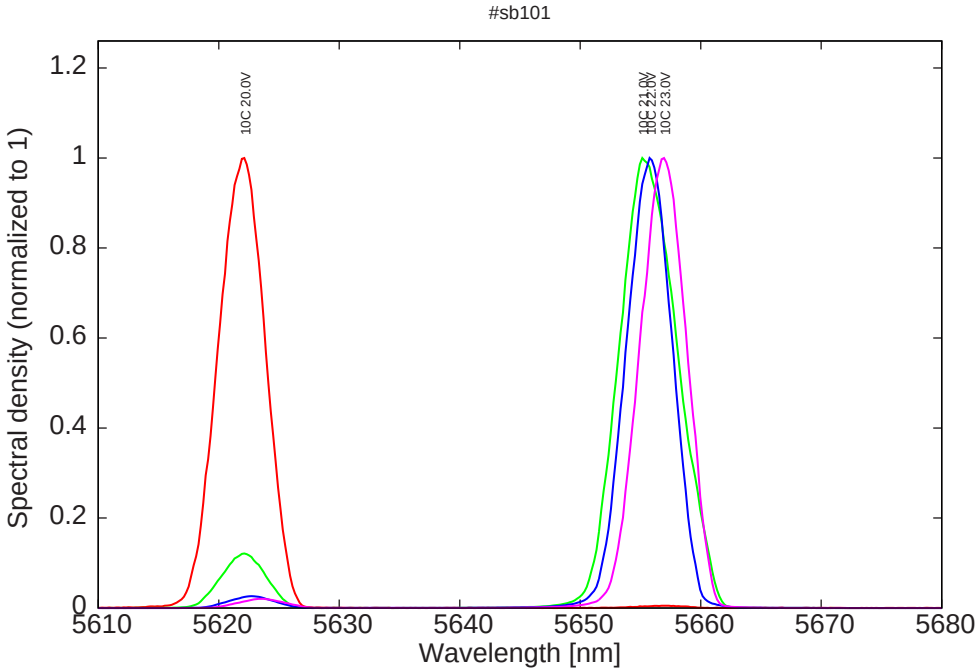

Figure 11: spectra at 10C for various LDD voltages (bimode)

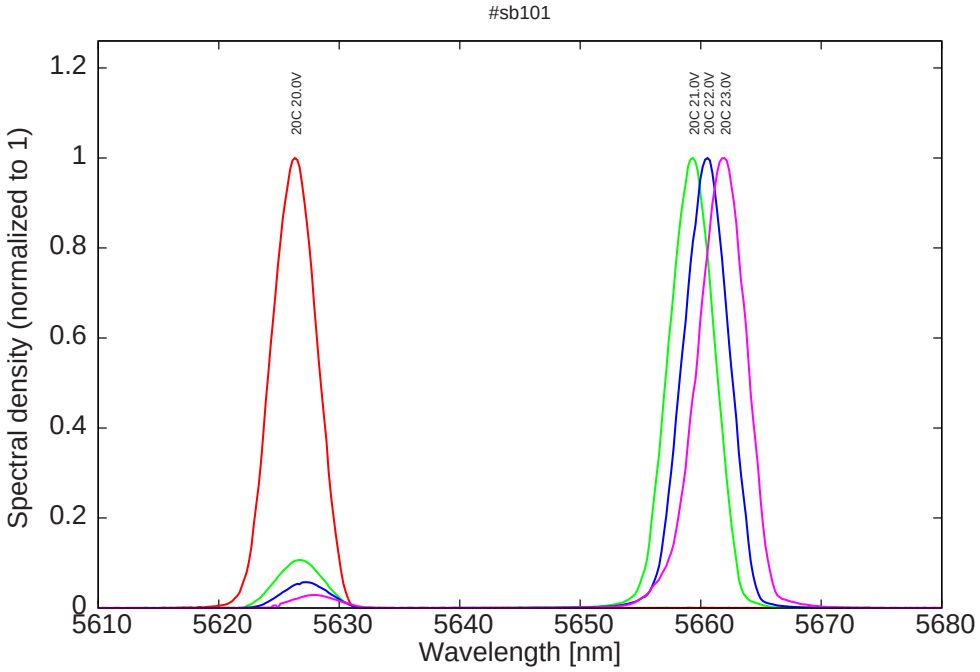

Figure 12: spectra at 20C for various LDD voltages (mono at threshold)

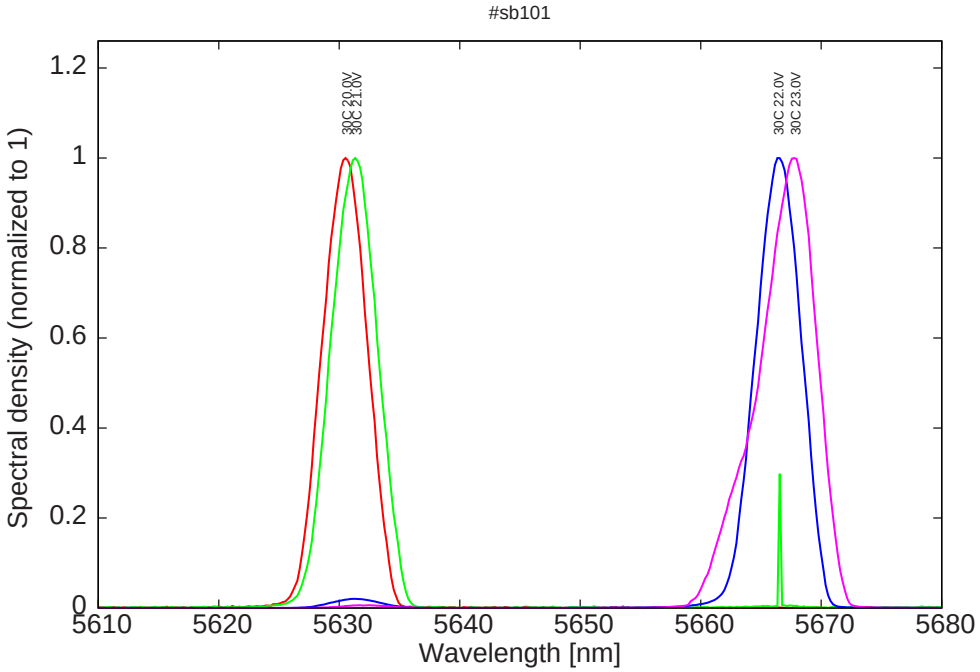

Figure 13: spectra at 30C for various LDD voltages (mono at threshold)