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Datasheet for #sb3575 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at
`http://www.alpeslasers.ch/?a=142`

WARNING: Operating the laser with longer pulses, higher repetition rate, higher voltage or higher current than specified in this document may cause damage. It 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).

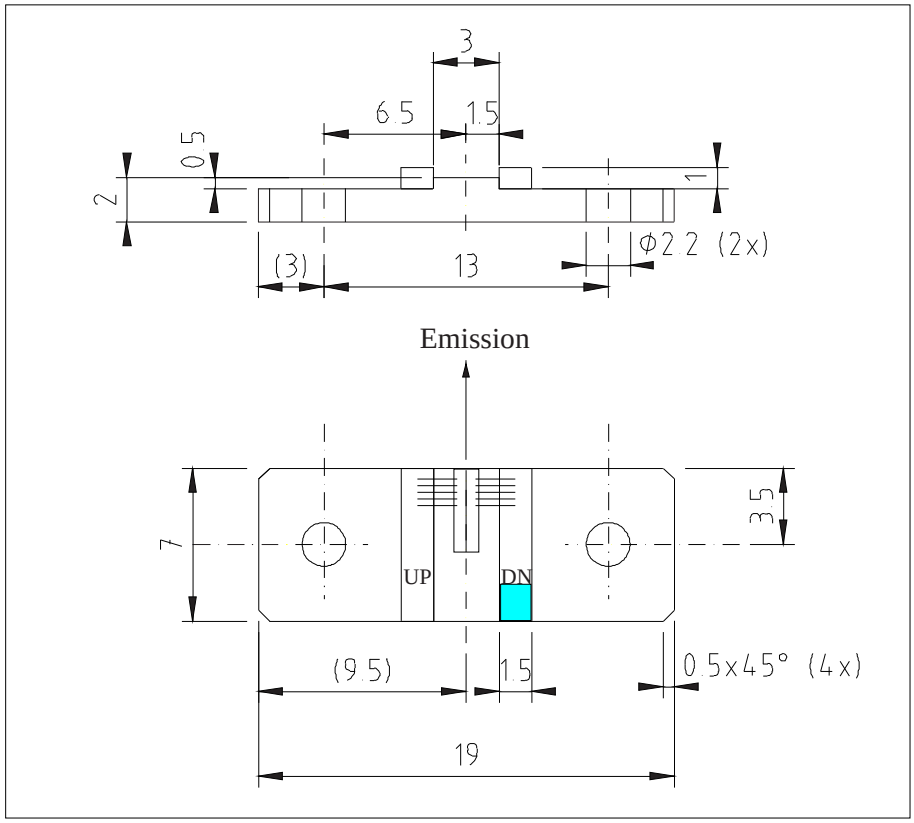


Figure 1: Support mounting for #sb3575 DN (please note that the laser is connected to the DN pad drawned in blue)

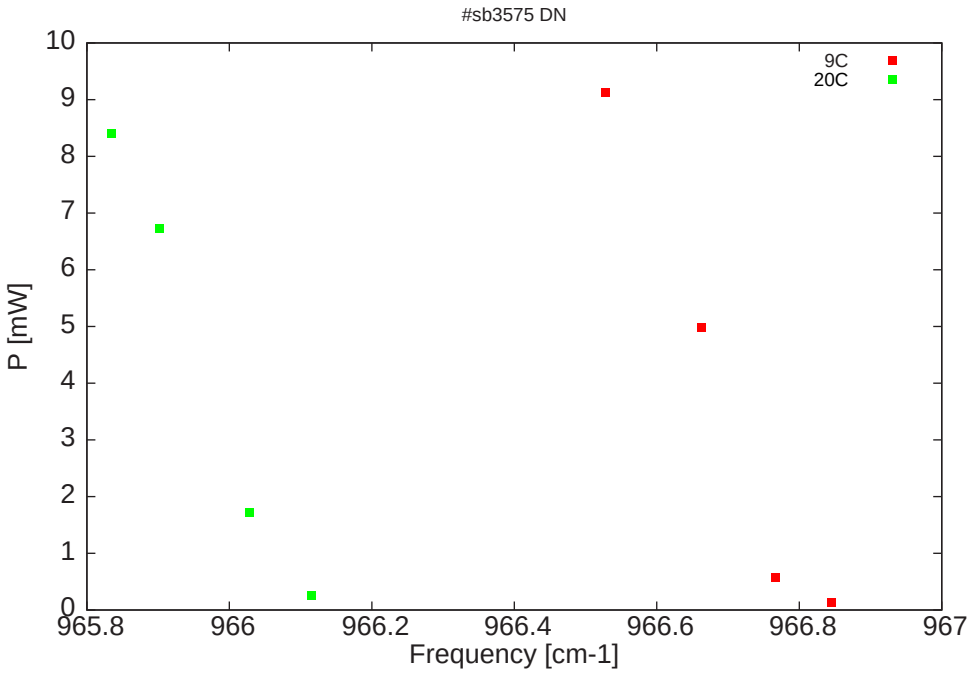


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

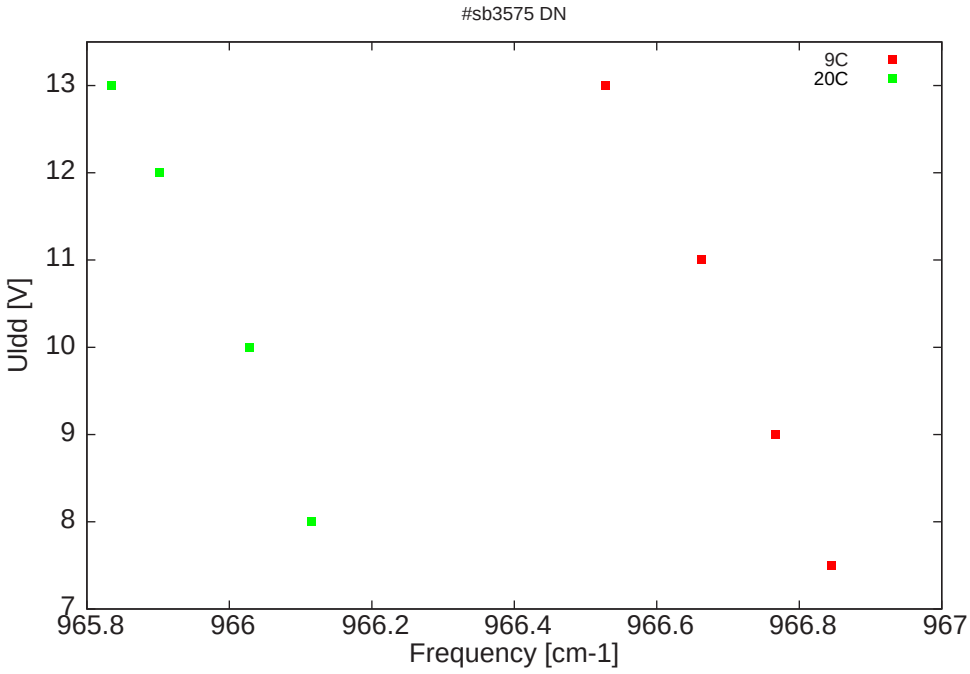


Figure 3: DC voltage fed to LDD (Uldd) as a function of the singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LDD}$[V]	I$_{pulse}$[A]
10342.9	966.8	0.1	9	7.5	0.38
10343.8	966.8	0.6	9	9	0.59
10344.9	966.7	5	9	11	1
10346.3	966.5	9.1	9	13	1.4
10350.7	966.1	0.2	20	8	0.45
10351.7	966	1.7	20	10	0.78
10353	965.9	6.7	20	12	1.2
10353.7	965.8	8.4	20	13	1.39

Table 1 : singlemode optical output power as function of operating parameters

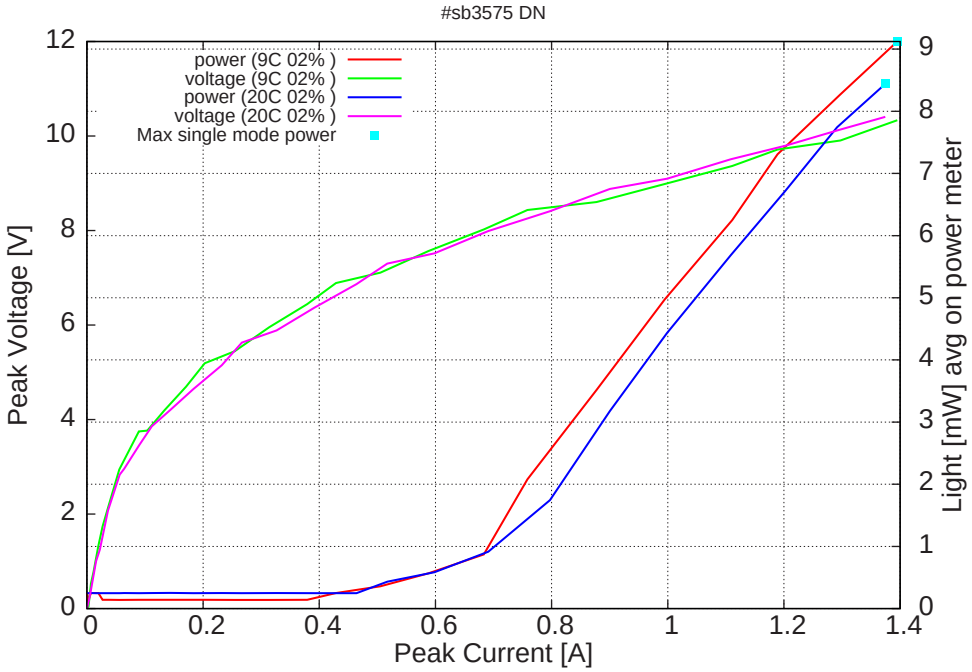


Figure 4: average power vs peak current at 9C and 20C at 2% duty-cycle (50ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

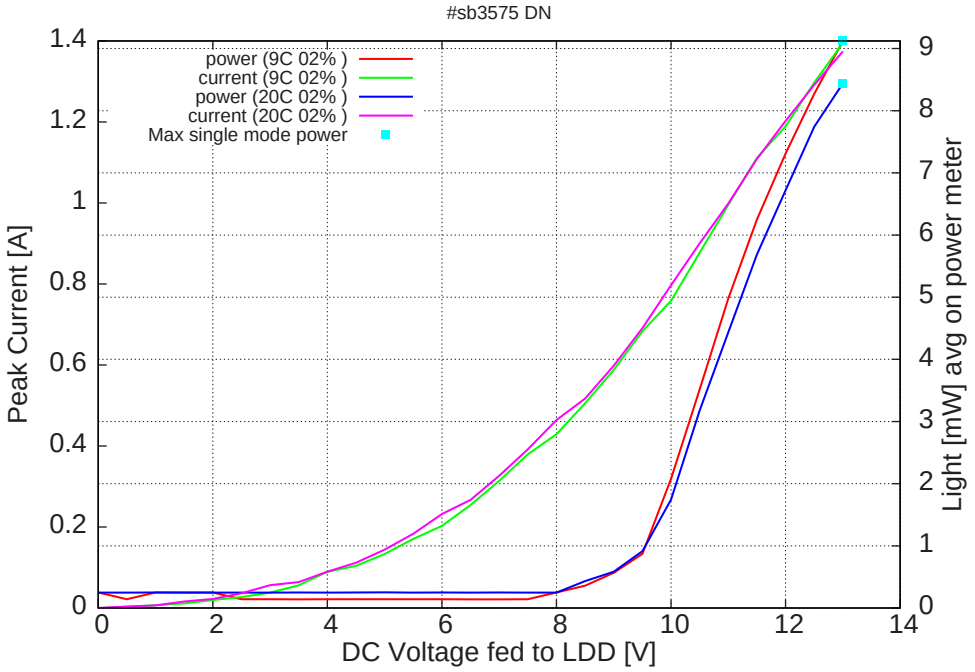


Figure 5: peak current and average power vs LDD voltage at 9C and 20C at 2% duty-cycle (100ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

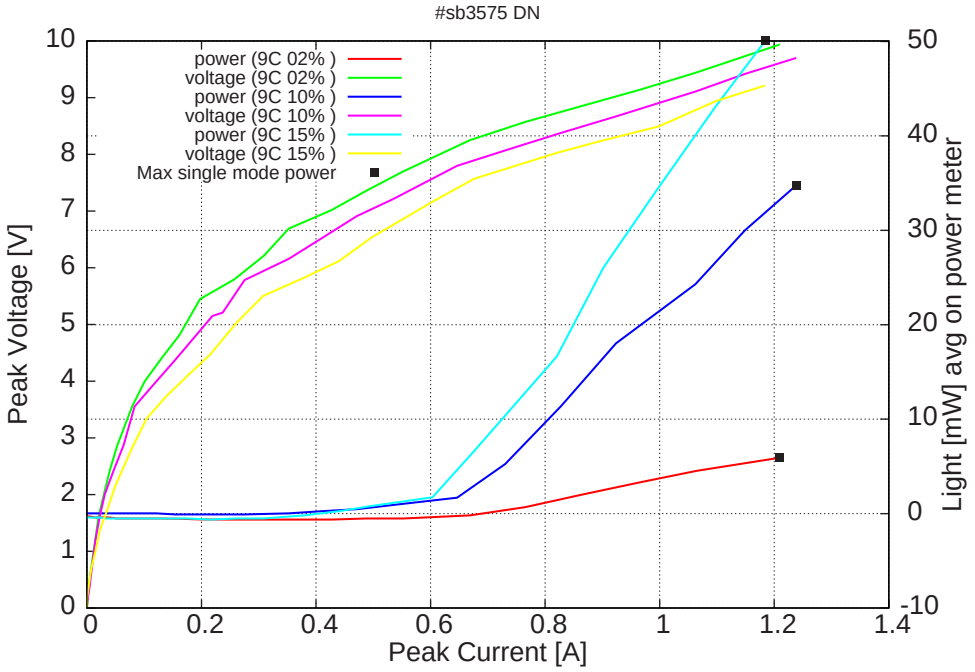


Figure 6: average power vs peak current at 9C for various duty-cycles (100ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

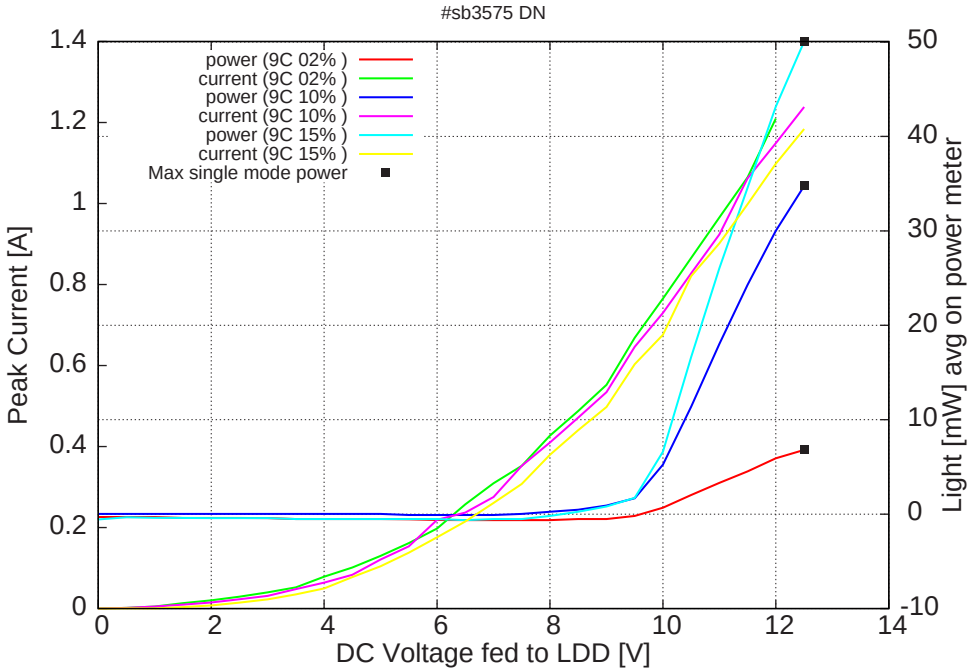


Figure 7: peak current and average power vs LDD voltage at 9C for various duty-cycles (100ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

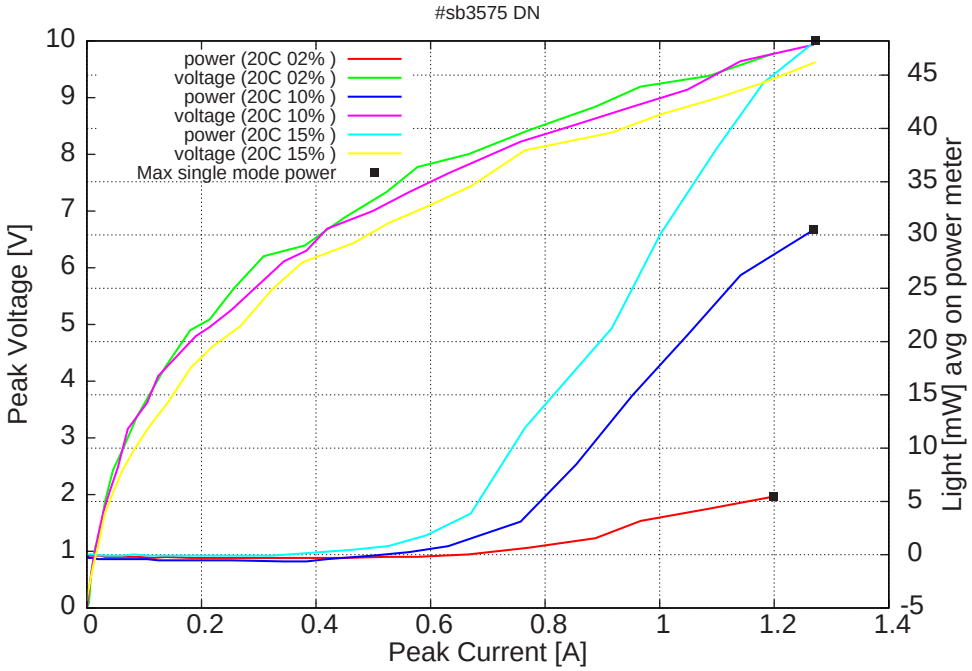


Figure 8: average power vs peak current at 20C for various duty-cycles (100ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

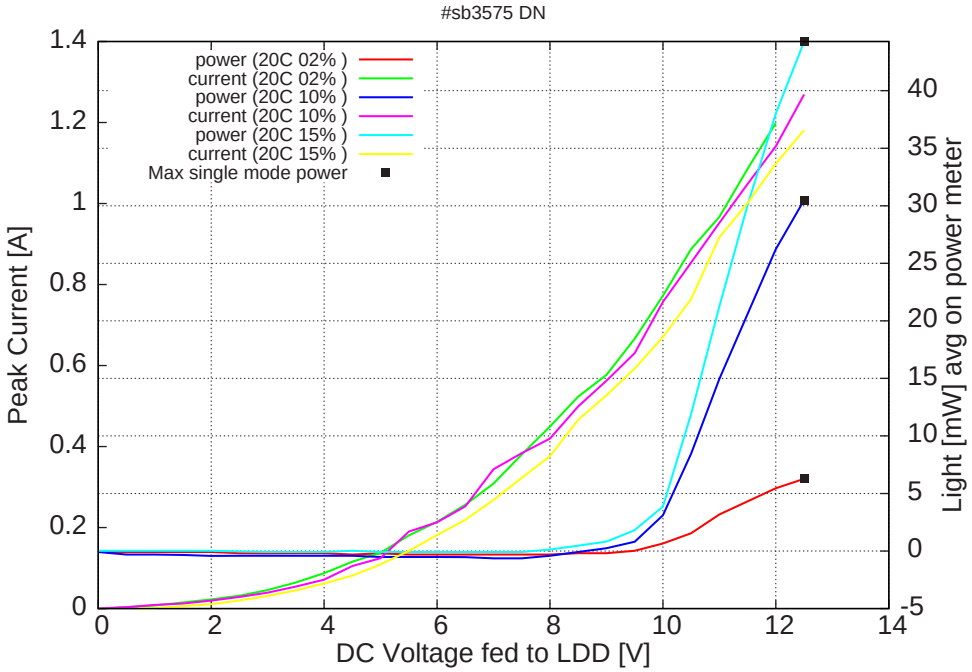


Figure 9: peak current and average power vs LDD voltage at 20C for various duty-cycles (100ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

Figure 8: spectra at 9C and 20C at 2% duty-cycle (50ns pulses) for various LDD voltages (SMSR>25dB)

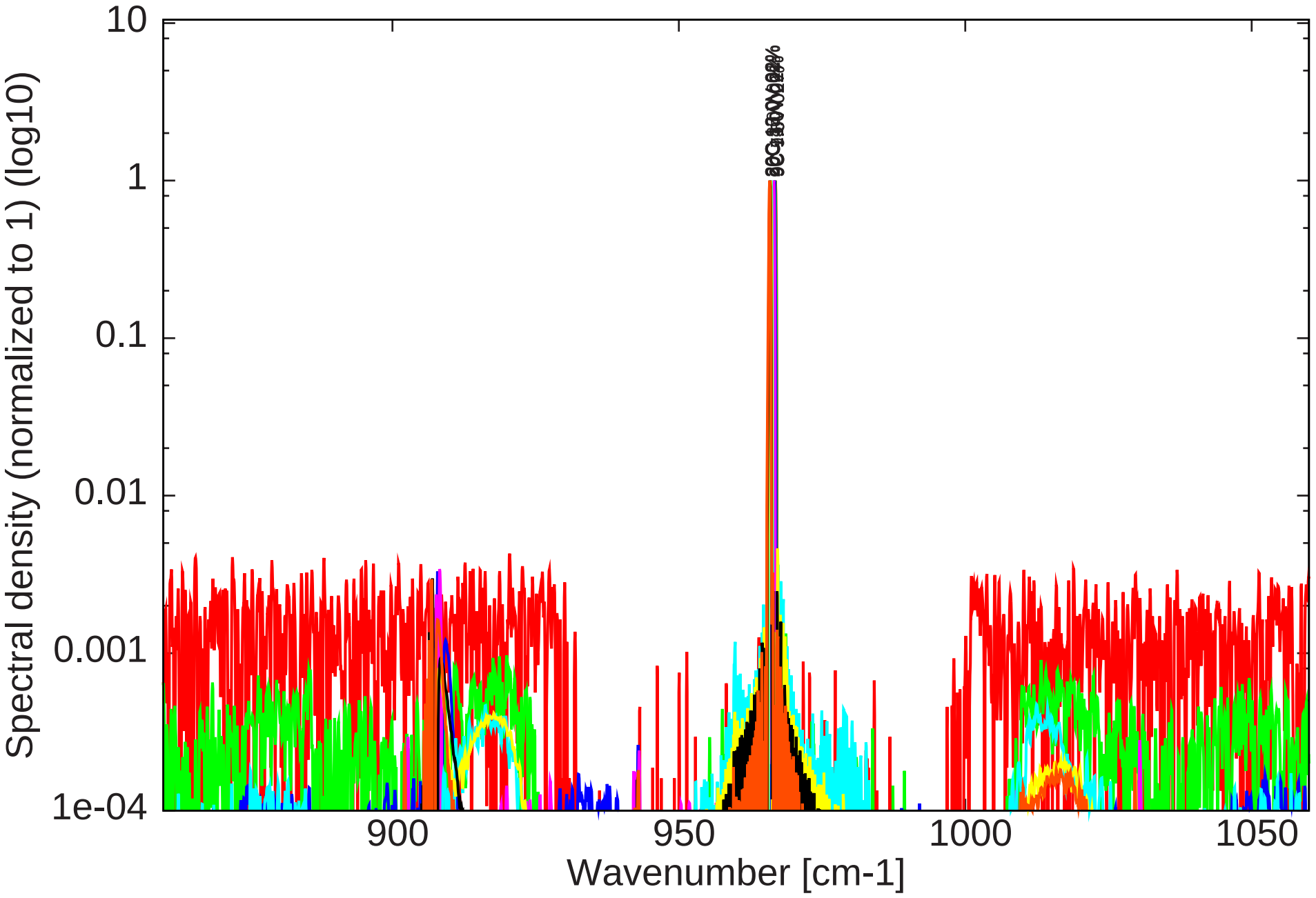
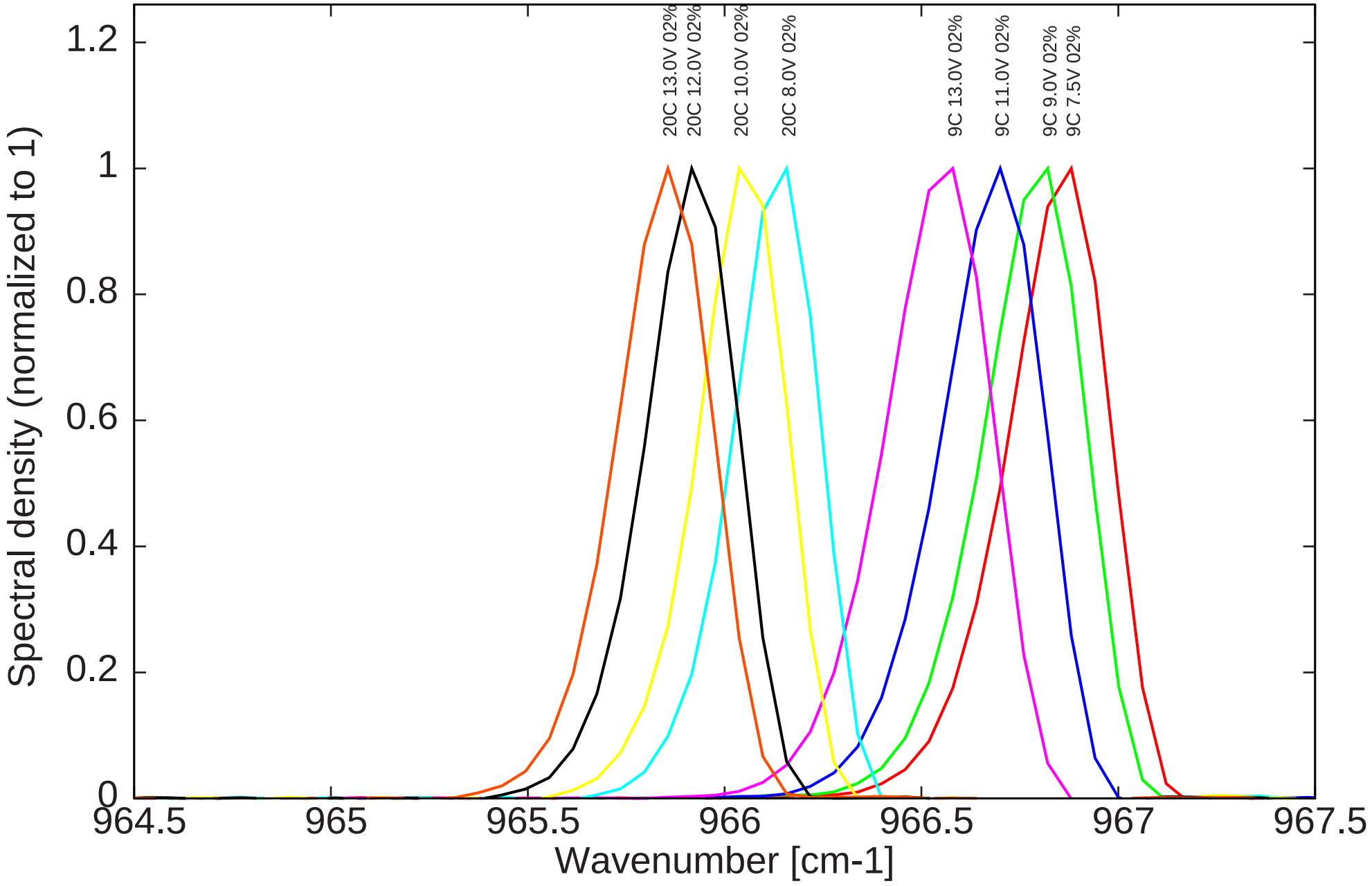


Figure 9: spectra at 9C and 20C at 2% duty-cycle (50ns pulses) for various LDD voltages



#sb3575 DN

Figure 10: spectra at 9C and 20C at 10% duty-cycle (100ns pulses) for various LDD voltages

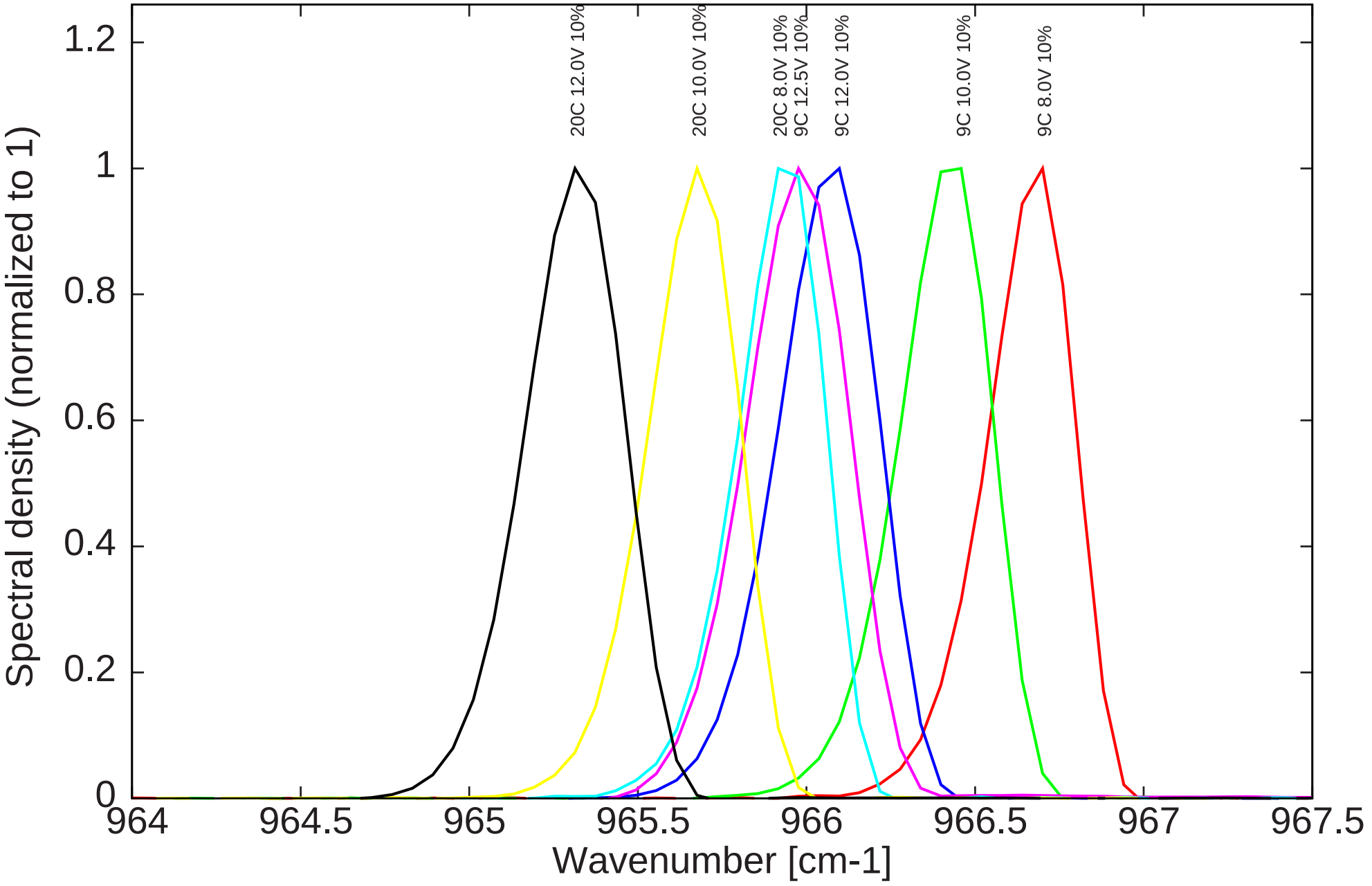


Figure 11: spectra at 9C and 20C at 15% duty-cycle (100ns pulses) for various LDD voltages