

**Datasheet for #sbcw3462 DN**

Recommendations:

Please read the starter kit user manual, if available, and have a look at the FAQ at <http://www.alpe lasers.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.

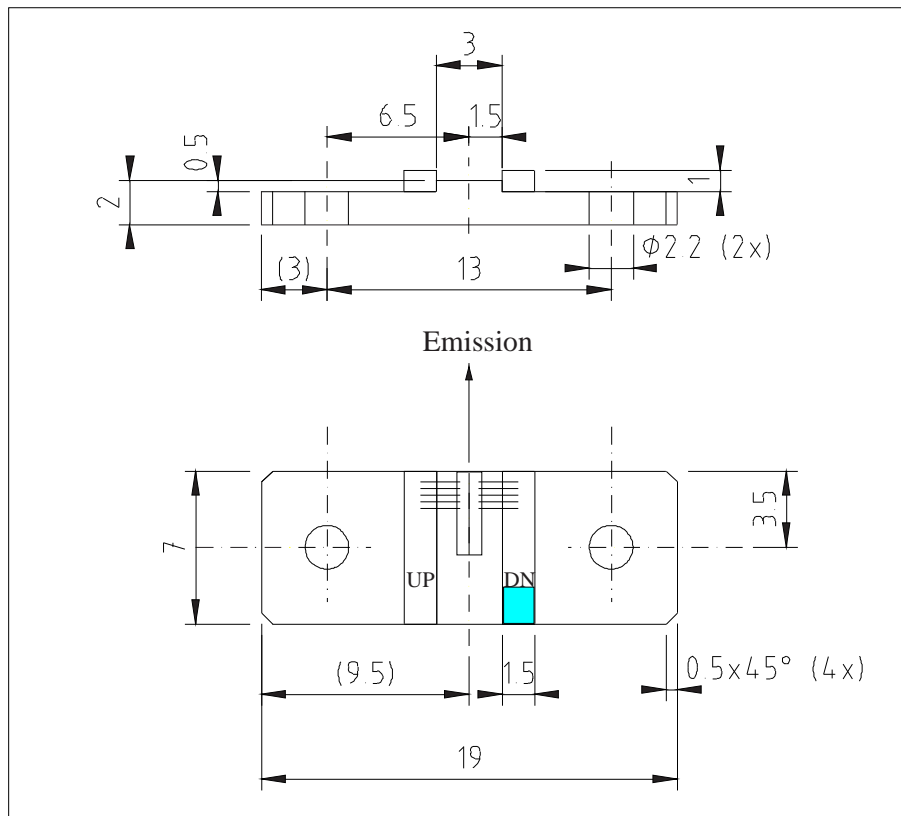


Figure 1: Support mounting for #sbcw3462 DN (please note that the laser is connected to the DN pad drawn in blue)

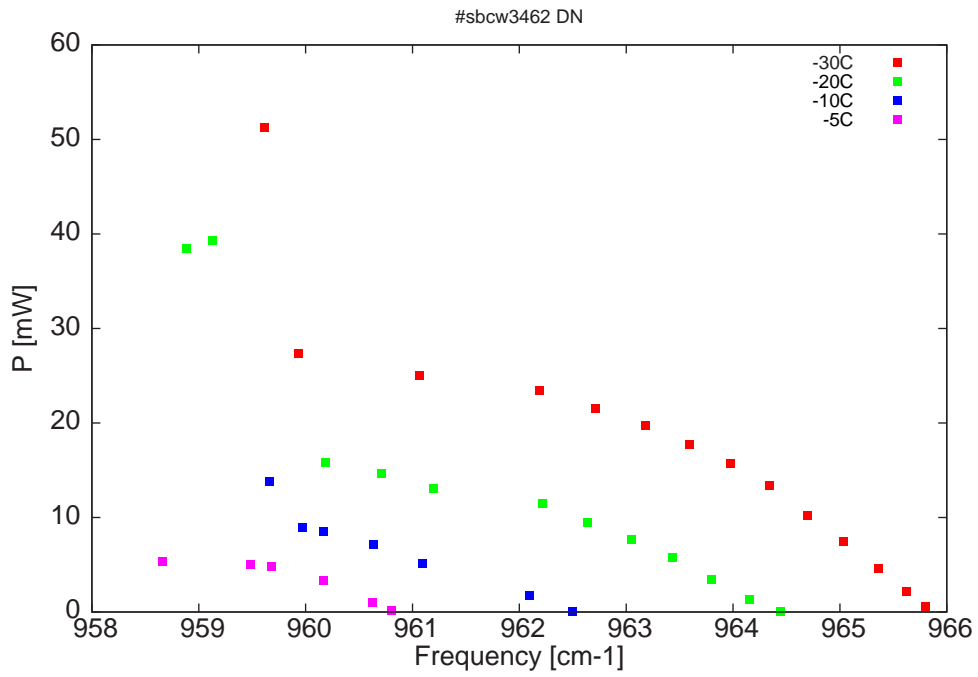


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

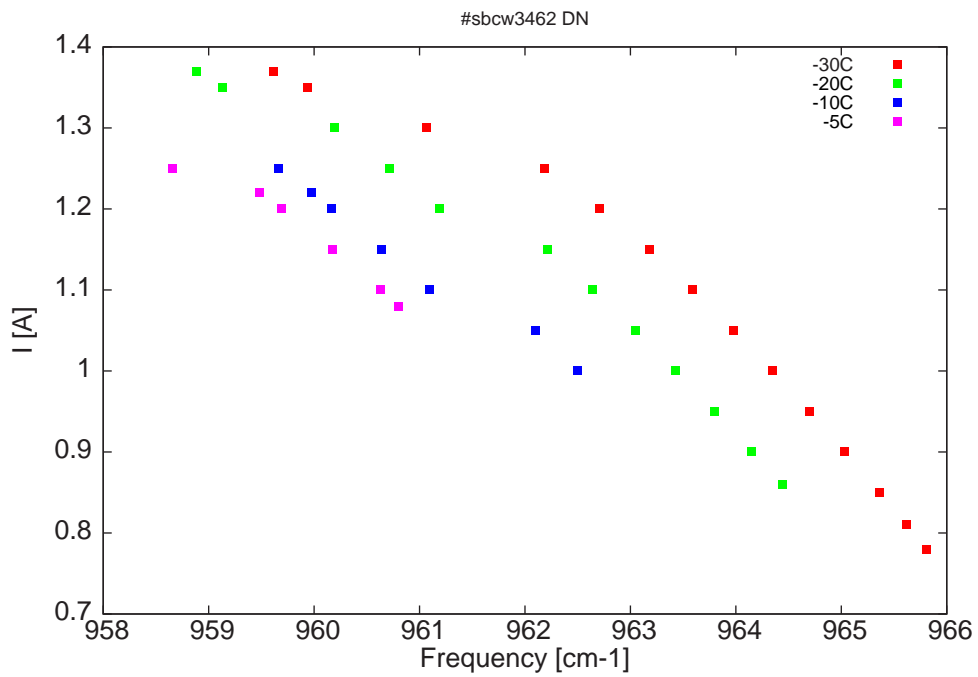


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
10354.1	965.8	0.6	-30	8.6	0.78
10356	965.6	2.2	-30	8.7	0.81
10358.8	965.4	4.6	-30	8.8	0.85
10362.3	965	7.5	-30	8.9	0.9
10365.9	964.7	10.3	-30	9.1	0.95
10369.7	964.3	13.3	-30	9.3	1
10373.7	964	15.8	-30	9.4	1.05
10377.8	963.6	17.7	-30	9.6	1.1
10382.3	963.2	19.8	-30	9.8	1.15
10387.3	962.7	21.5	-30	10	1.2
10393	962.2	23.5	-30	10.1	1.25
10405.1	961.1	25	-30	10.3	1.3
10417.4	959.9	27.3	-30	10.5	1.35
10420.9	959.6	51.3	-30	10.6	1.37
10368.7	964.4	0.1	-20	8.8	0.86
10371.8	964.2	1.3	-20	8.9	0.9
10375.6	963.8	3.5	-20	9.1	0.95
10379.6	963.4	5.8	-20	9.3	1
10383.7	963	7.6	-20	9.4	1.05
10388.1	962.6	9.5	-20	9.6	1.1
10392.7	962.2	11.5	-20	9.8	1.15
10403.7	961.2	13	-20	10	1.2
10409	960.7	14.6	-20	10.2	1.25
10414.6	960.2	15.9	-20	10.3	1.3
10426.2	959.1	39.3	-20	10.5	1.35
10428.7	958.9	38.4	-20	10.6	1.37
10389.6	962.5	0.1	-10	9.2	1
10394	962.1	1.8	-10	9.4	1.05
10404.8	961.1	5.1	-10	9.6	1.1
10409.7	960.6	7.1	-10	9.8	1.15
10414.8	960.2	8.5	-10	9.9	1.2
10417	960	8.9	-10	10	1.22
10420.4	959.7	13.8	-10	10.1	1.25
10408	960.8	0.2	-5	9.5	1.08
10409.9	960.6	1	-5	9.6	1.1
10414.8	960.2	3.3	-5	9.8	1.15
10420.1	959.7	4.8	-5	9.9	1.2
10422.2	959.5	5.1	-5	10	1.22
10431.3	958.7	5.4	-5	10.1	1.25

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

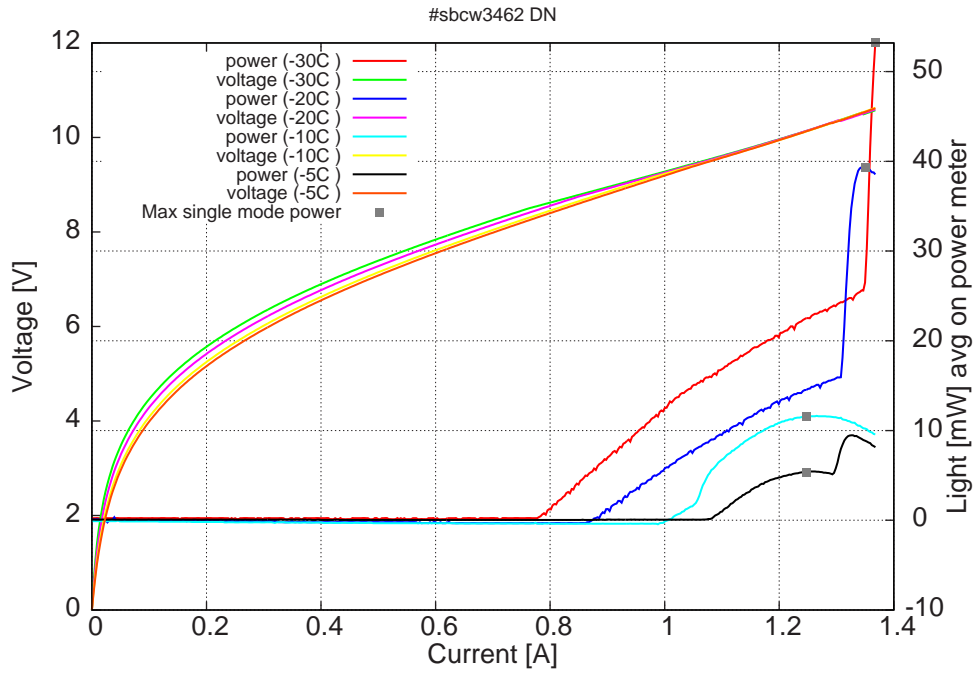


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -30C:  $I_{th}=780\text{mA}$  /  $V_{th}= 8.7\text{V}$  (2-wires measurements).

Maximum operation current: 1.37A between -30C and -20C, 1.25A between -10C and -5C.



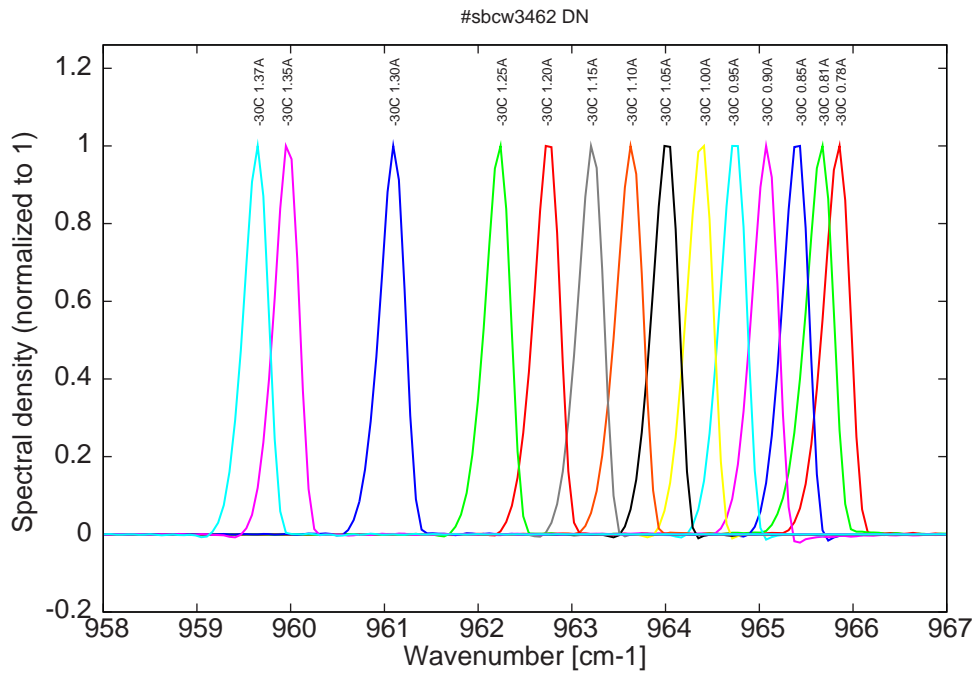


Figure 5: spectra at -30C for various DC currents (all monomode with mode jumping for  $I > 1.25A$  and for  $I > 1.30A$ , see Fig. 3)

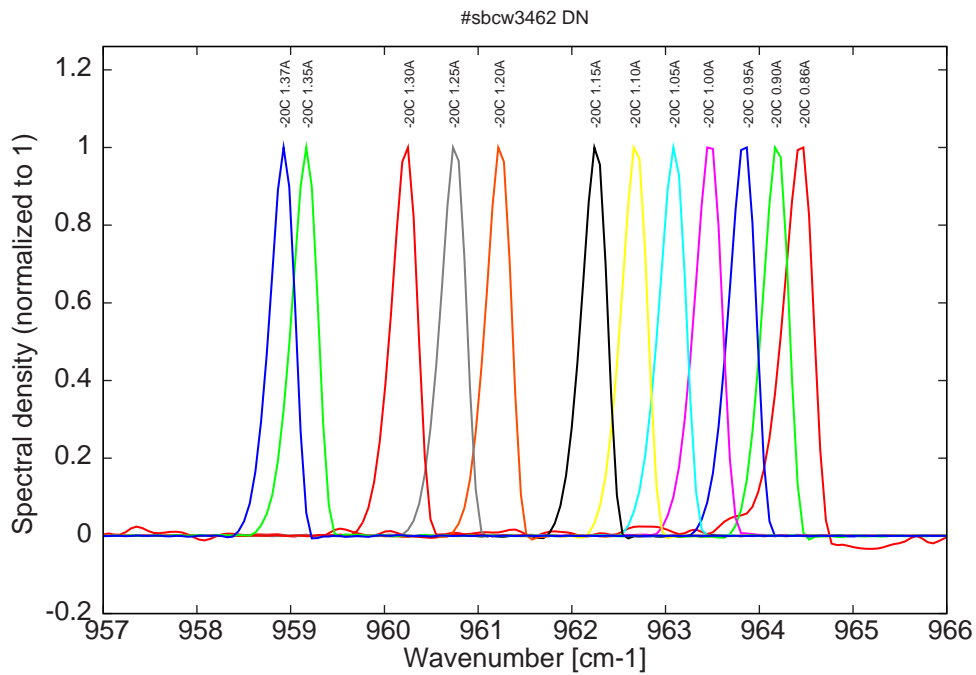


Figure 6: spectra at -20C for various DC currents (all monomode with mode jumping for  $I > 1.15A$  and for  $I > 1.30A$ , see Fig. 3)

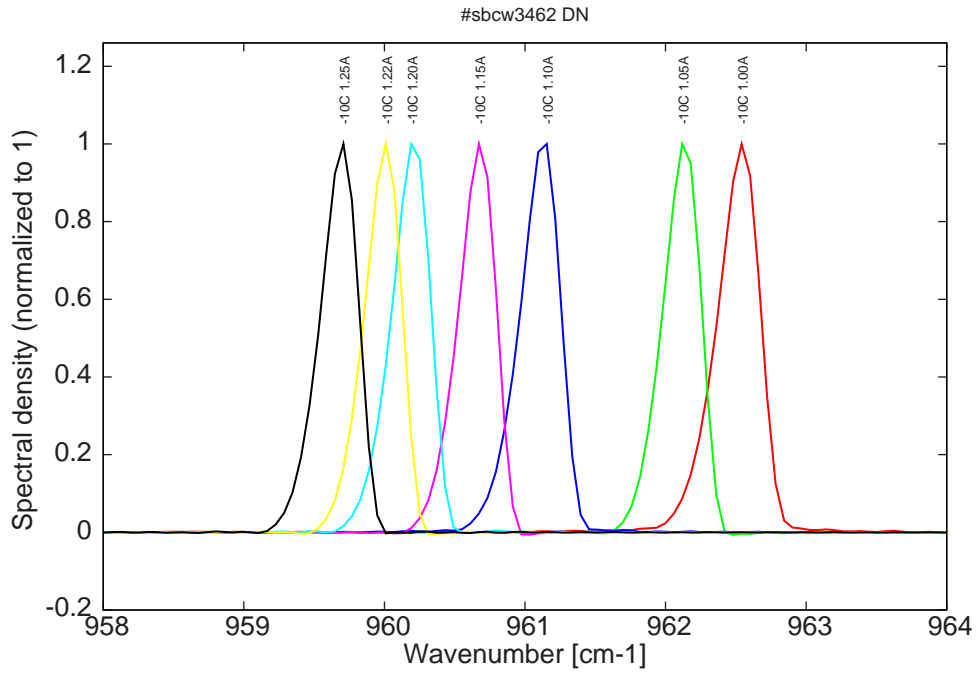


Figure 7: spectra at -10C for various DC currents (all monomode with mode jumping for  $I > 1.05A$ , see Fig. 3)

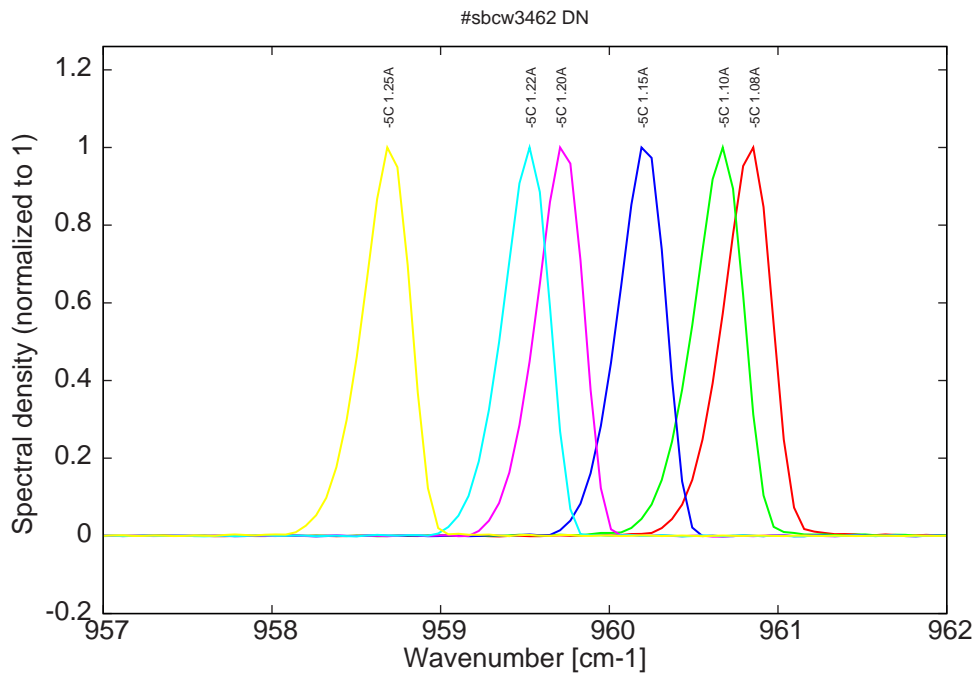


Figure 8: spectra at -5C for various DC currents (all monomode with mode jumping for  $I > 1.22A$ ; below 1.22A on the same mode than at high currents at lower temperatures, see Fig. 3)