

**Datasheet for #sbcw22909 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 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 be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.

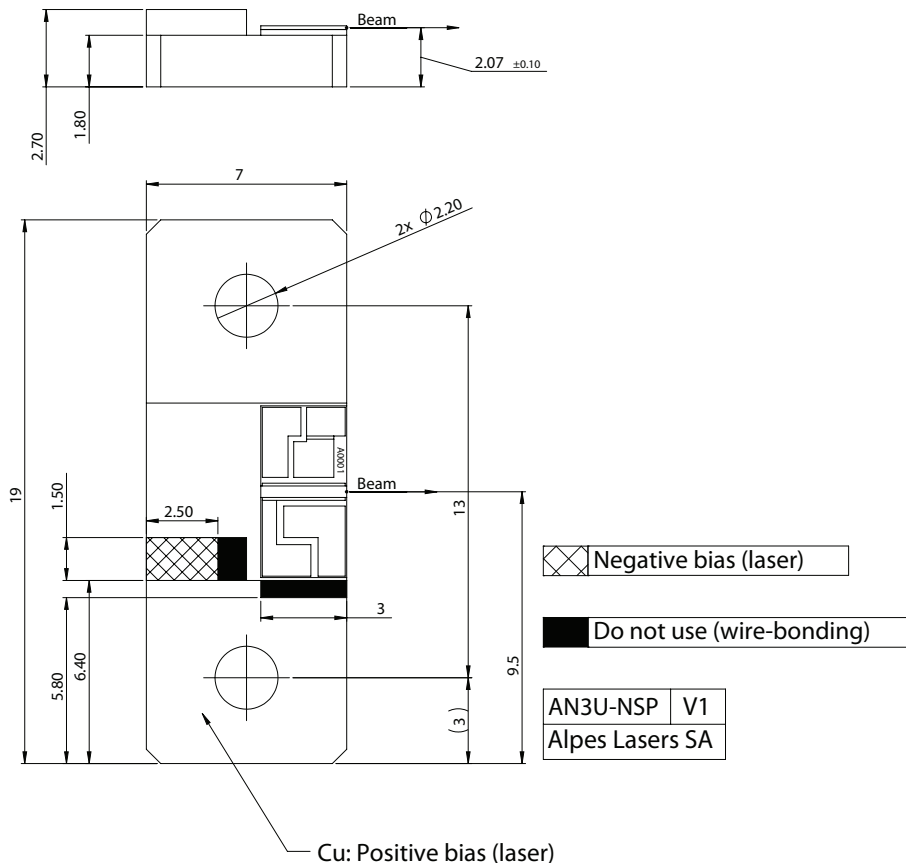


Figure 1: Mechanical and electrical interface for #sbcw22909 DN

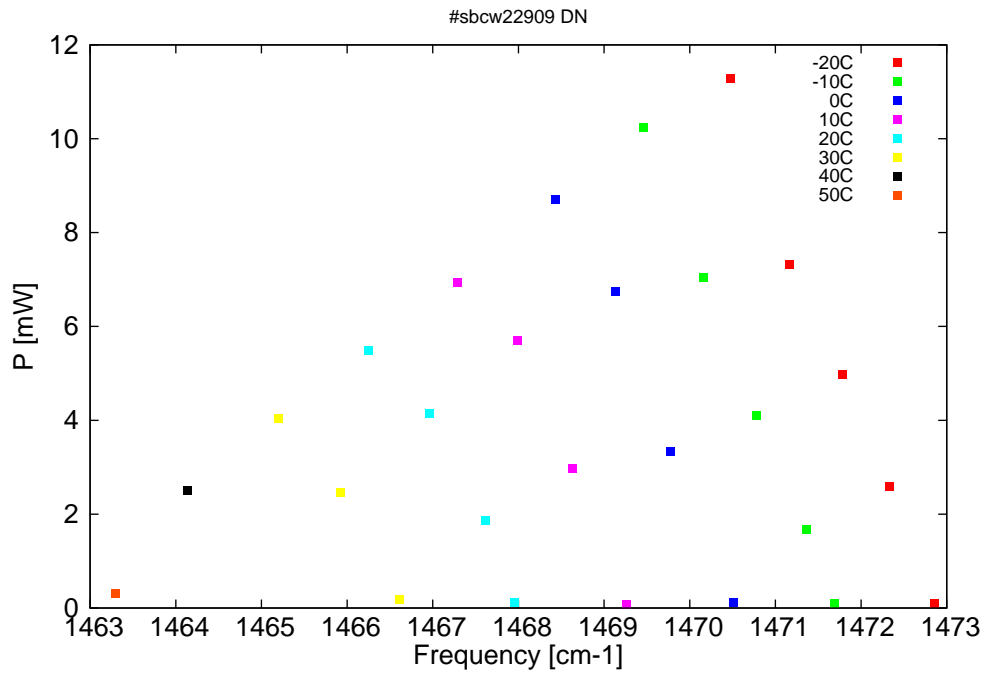


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

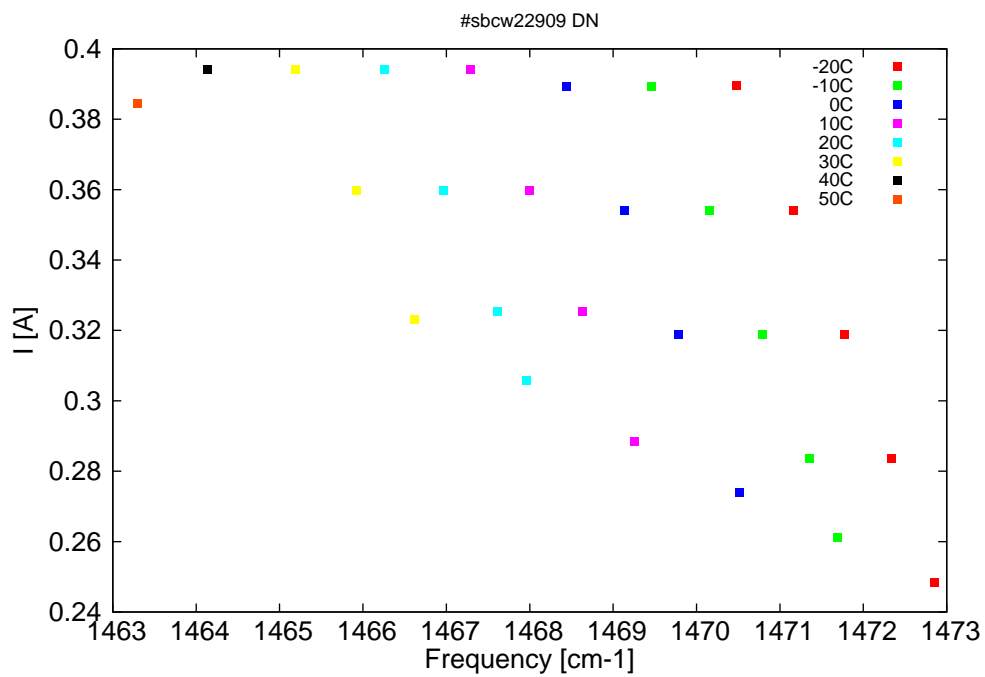


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6789.5	1472.9	0.1	-20	12.68	0.248
6791.9	1472.3	2.6	-20	13.11	0.284
6794.5	1471.8	5	-20	13.52	0.319
6797.3	1471.2	7.3	-20	13.94	0.354
6800.5	1470.5	11.3	-20	14.35	0.39
6794.9	1471.7	0.1	-10	12.65	0.261
6796.4	1471.4	1.7	-10	12.91	0.284
6799.1	1470.8	4.1	-10	13.32	0.319
6802	1470.2	7	-10	13.73	0.354
6805.2	1469.5	10.2	-10	14.13	0.389
6800.3	1470.5	0.1	0	12.61	0.274
6803.7	1469.8	3.3	0	13.13	0.319
6806.7	1469.1	6.8	0	13.53	0.354
6810	1468.4	8.7	0	13.93	0.389
6806.1	1469.3	0.1	10	12.61	0.288
6809	1468.6	3	10	13.03	0.325
6812	1468	5.7	10	13.41	0.36
6815.3	1467.3	6.9	10	13.8	0.394
6812.2	1468	0.1	20	12.63	0.306
6813.8	1467.6	1.9	20	12.85	0.325
6816.8	1467	4.1	20	13.23	0.36
6820.1	1466.3	5.5	20	13.62	0.394
6818.4	1466.6	0.2	30	12.66	0.323
6821.7	1465.9	2.5	30	13.06	0.36
6825	1465.2	4	30	13.44	0.394
6829.9	1464.1	2.5	40	13.27	0.394
6833.9	1463.3	0.3	50	12.99	0.385

Table 1: Singlemode optical output power as function of operating parameters.

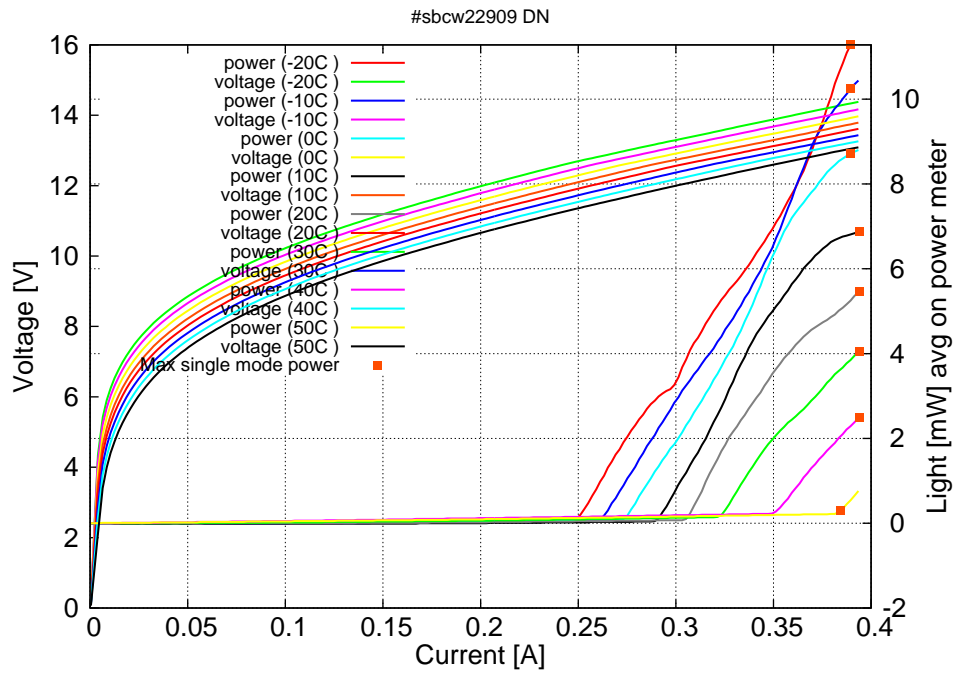


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.24A$  /  $V_{th}=12.6V$  (2-wires measurements). Maximum operation current: 0.395A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

