

Datasheet for #sbcw8309 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.

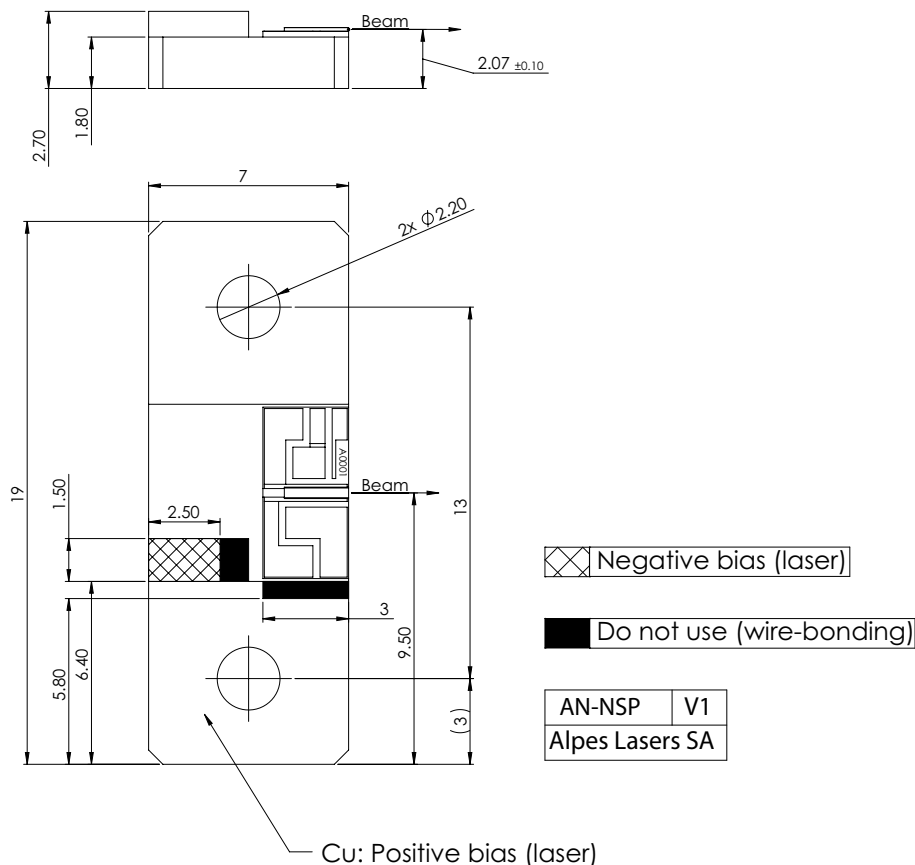


Figure 1: Mechanical and electrical interface for #sbcw8309 DN

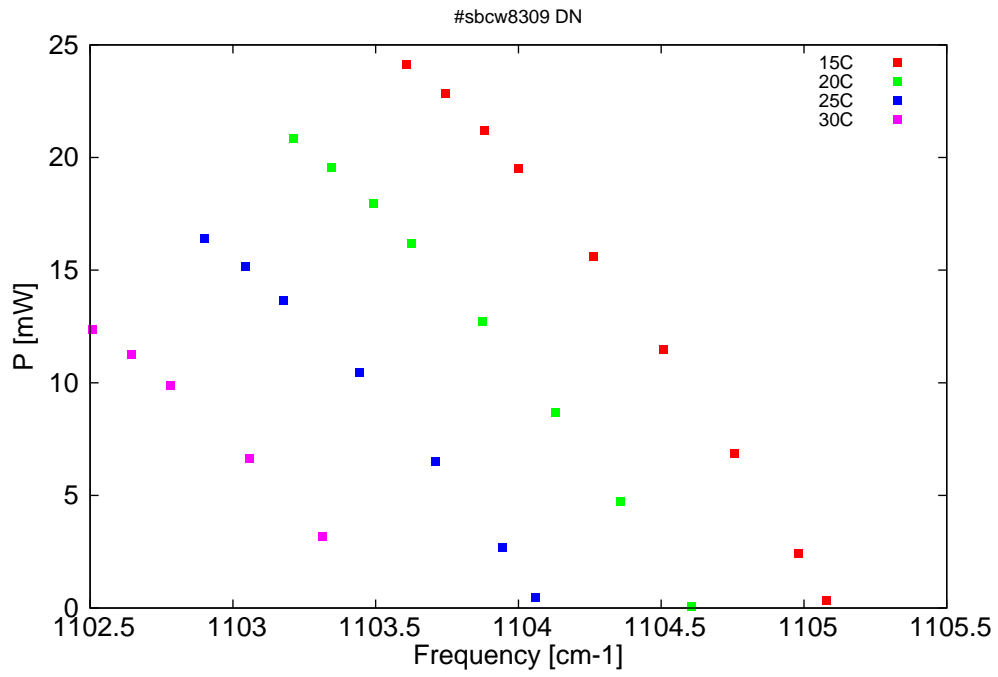


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

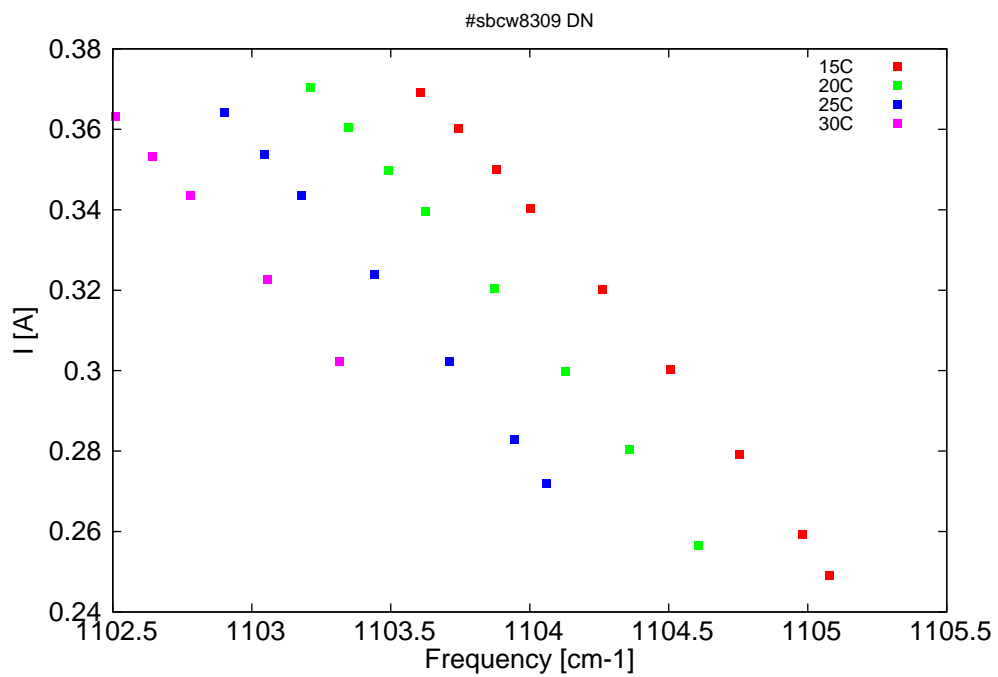


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9049.1	1105.1	0.3	15	10.75	0.249
9049.9	1105	2.4	15	10.9	0.259
9051.8	1104.8	6.9	15	11.14	0.279
9053.8	1104.5	11.5	15	11.4	0.3
9055.8	1104.3	15.6	15	11.64	0.32
9058	1104	19.5	15	11.87	0.34
9058.9	1103.9	21.2	15	11.98	0.35
9060.1	1103.7	22.8	15	12.09	0.36
9061.2	1103.6	24.1	15	12.2	0.369
9053	1104.6	0.1	20	10.84	0.257
9055	1104.4	4.7	20	11.11	0.28
9056.9	1104.1	8.7	20	11.34	0.3
9059	1103.9	12.7	20	11.58	0.32
9061	1103.6	16.2	20	11.8	0.34
9062.1	1103.5	17.9	20	11.91	0.35
9063.3	1103.3	19.6	20	12.03	0.36
9064.4	1103.2	20.9	20	12.14	0.37
9057.5	1104.1	0.5	25	10.9	0.272
9058.4	1103.9	2.7	25	11.08	0.283
9060.3	1103.7	6.5	25	11.31	0.302
9062.5	1103.4	10.4	25	11.56	0.324
9064.7	1103.2	13.7	25	11.78	0.344
9065.8	1103	15.1	25	11.9	0.354
9067	1102.9	16.4	25	12.01	0.364
9063.6	1103.3	3.2	30	11.25	0.302
9065.7	1103.1	6.6	30	11.49	0.323
9068	1102.8	9.9	30	11.72	0.344
9069.1	1102.6	11.2	30	11.83	0.353
9070.2	1102.5	12.4	30	11.94	0.363

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

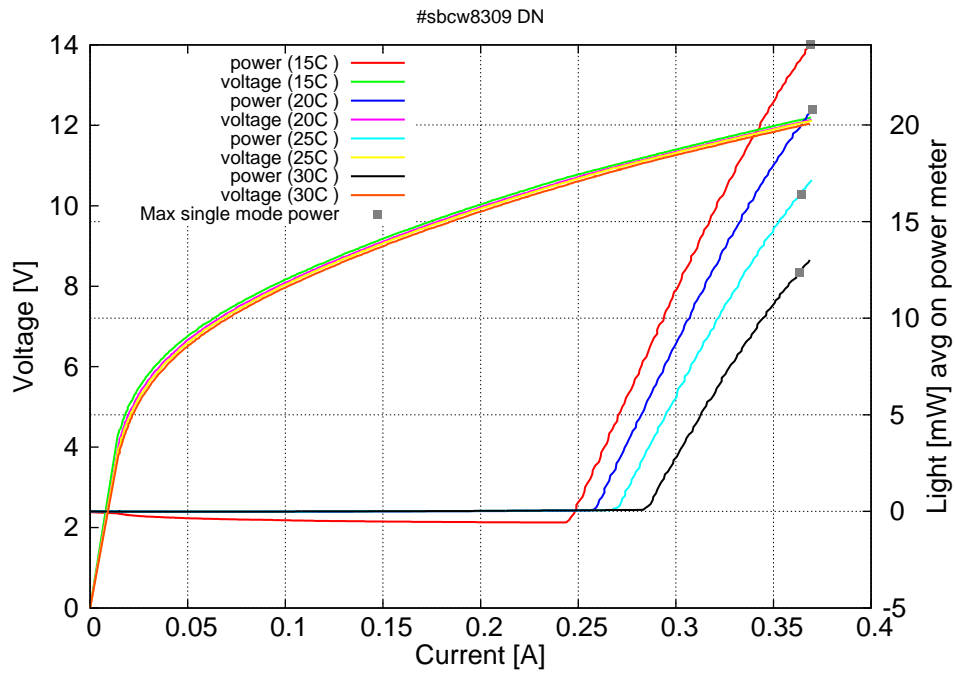


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 15C:  $I_{th}=0.24A$  /  $V_{th}=10.7V$  (2-wires measurements). Maximum operation current: 0.37A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

