

**Datasheet for #sbcw17539 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.

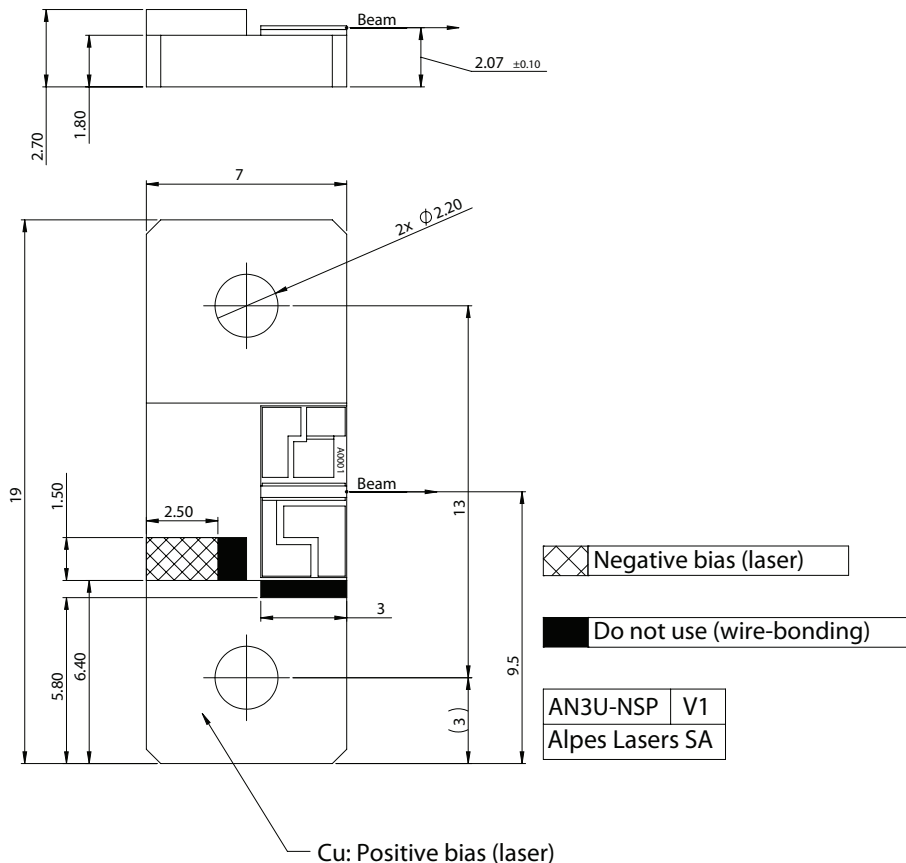


Figure 1: Mechanical and electrical interface for #sbcw17539 DN

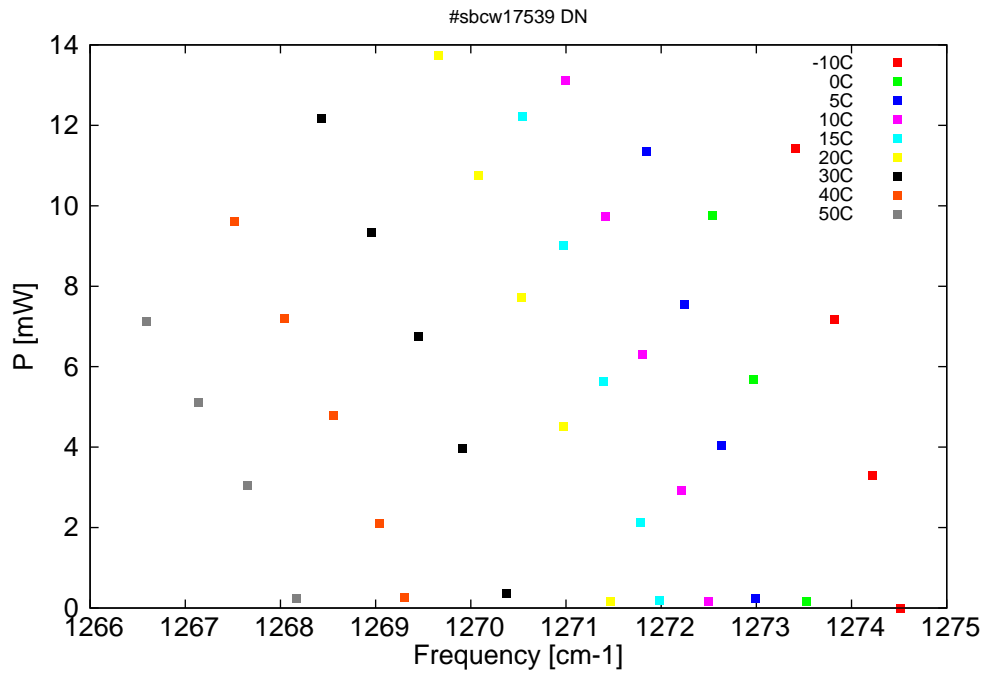


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

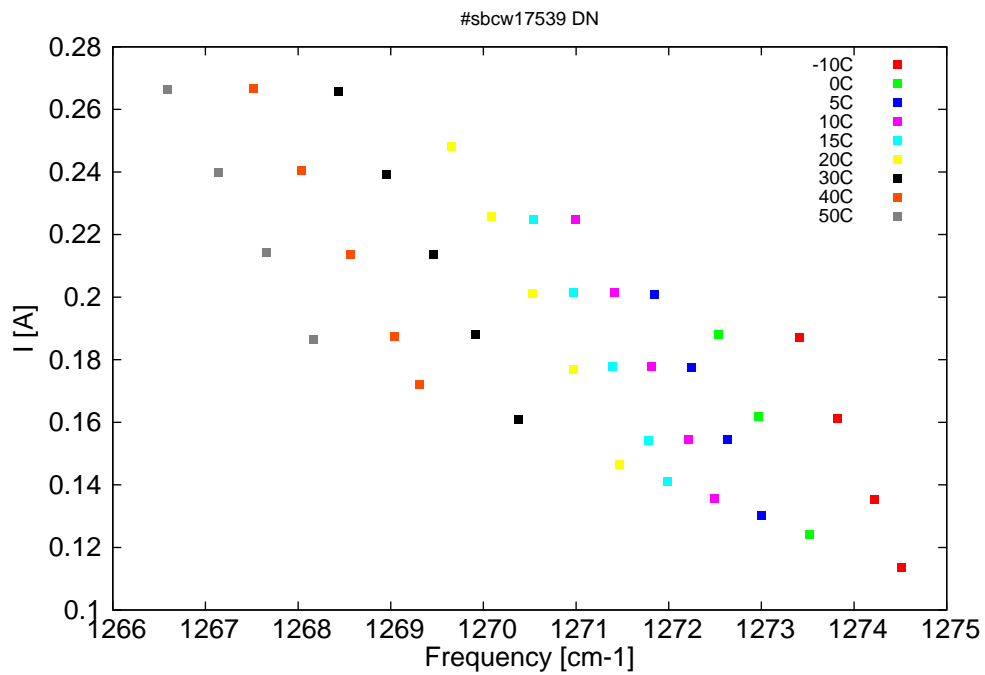


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7846.1	1274.5	0	-10	7.63	0.114
7848	1274.2	3.3	-10	7.88	0.135
7850.4	1273.8	7.2	-10	8.15	0.161
7852.9	1273.4	11.4	-10	8.41	0.187
7852.2	1273.5	0.2	0	7.65	0.124
7855.7	1273	5.7	0	8.05	0.162
7858.3	1272.5	9.8	0	8.32	0.188
7855.5	1273	0.2	5	7.68	0.13
7857.7	1272.6	4	5	7.94	0.154
7860.1	1272.2	7.5	5	8.18	0.178
7862.6	1271.8	11.3	5	8.41	0.201
7858.6	1272.5	0.2	10	7.69	0.136
7860.3	1272.2	2.9	10	7.89	0.154
7862.8	1271.8	6.3	10	8.13	0.178
7865.3	1271.4	9.7	10	8.36	0.202
7867.9	1271	13.1	10	8.59	0.225
7861.7	1272	0.2	15	7.7	0.141
7863	1271.8	2.1	15	7.84	0.154
7865.4	1271.4	5.6	15	8.08	0.178
7868	1271	9	15	8.31	0.201
7870.7	1270.5	12.2	15	8.54	0.225
7864.9	1271.5	0.2	20	7.71	0.147
7868	1271	4.5	20	8.03	0.177
7870.7	1270.5	7.7	20	8.27	0.201
7873.5	1270.1	10.8	20	8.5	0.226
7876.2	1269.7	13.7	20	8.72	0.248
7871.7	1270.4	0.4	30	7.77	0.161
7874.5	1269.9	4	30	8.05	0.188
7877.4	1269.5	6.8	30	8.29	0.214
7880.5	1269	9.3	30	8.54	0.239
7883.8	1268.4	12.2	30	8.79	0.266
7878.3	1269.3	0.3	40	7.8	0.172
7880	1269	2.1	40	7.96	0.187
7882.9	1268.6	4.8	40	8.22	0.214
7886.2	1268	7.2	40	8.47	0.24
7889.5	1267.5	9.6	40	8.71	0.267
7885.4	1268.2	0.2	50	7.87	0.186
7888.6	1267.7	3.1	50	8.14	0.214
7891.8	1267.1	5.1	50	8.39	0.24
7895.2	1266.6	7.1	50	8.63	0.266

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

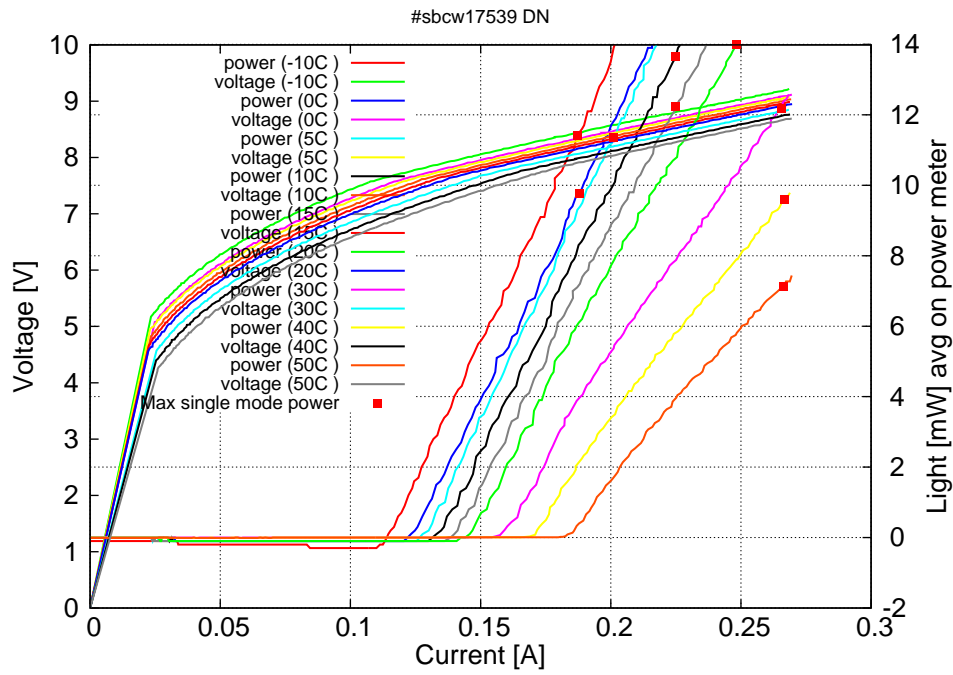


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C:  $I_{th}=0.11A$  /  $V_{th}=7.6V$  (2-wires measurements). Maximum operation current: 0.19A between -10C and 0C, 0.20A at 5C, 0.225A between 10C and 15C, 0.25A at 20C, 0.27A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

