

**Datasheet for #sbcw25094 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.

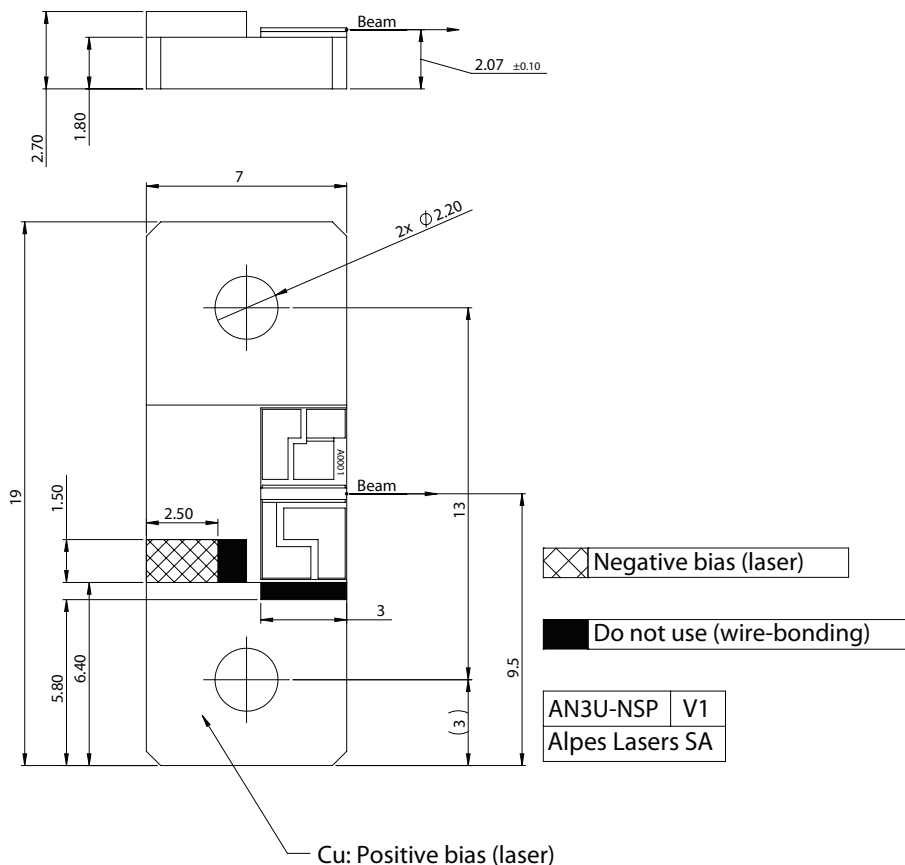


Figure 1: Mechanical and electrical interface for #sbcw25094 DN

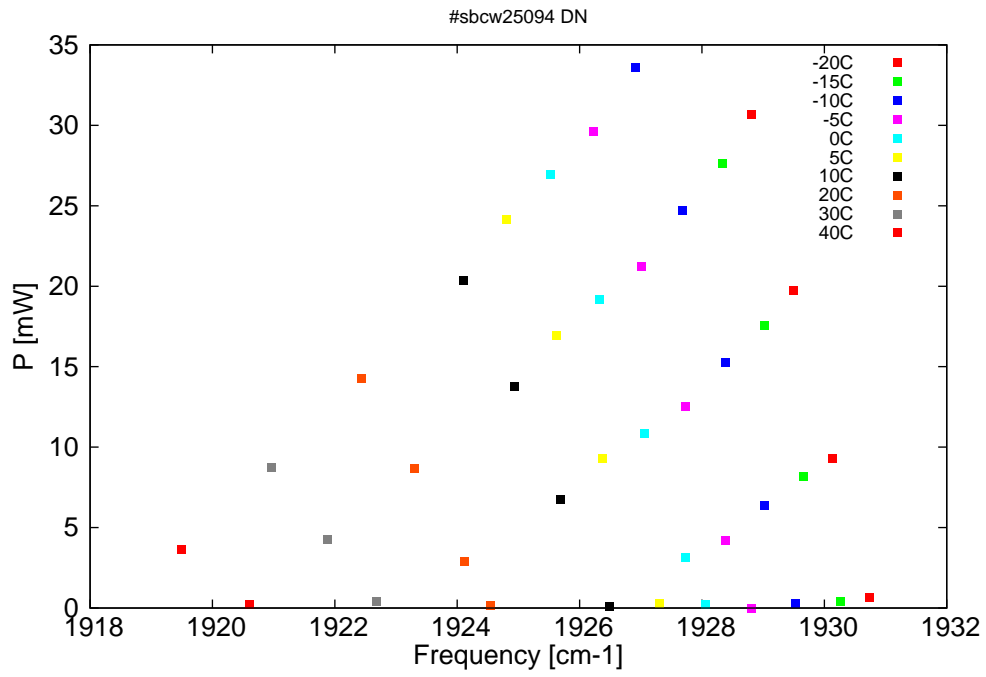


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

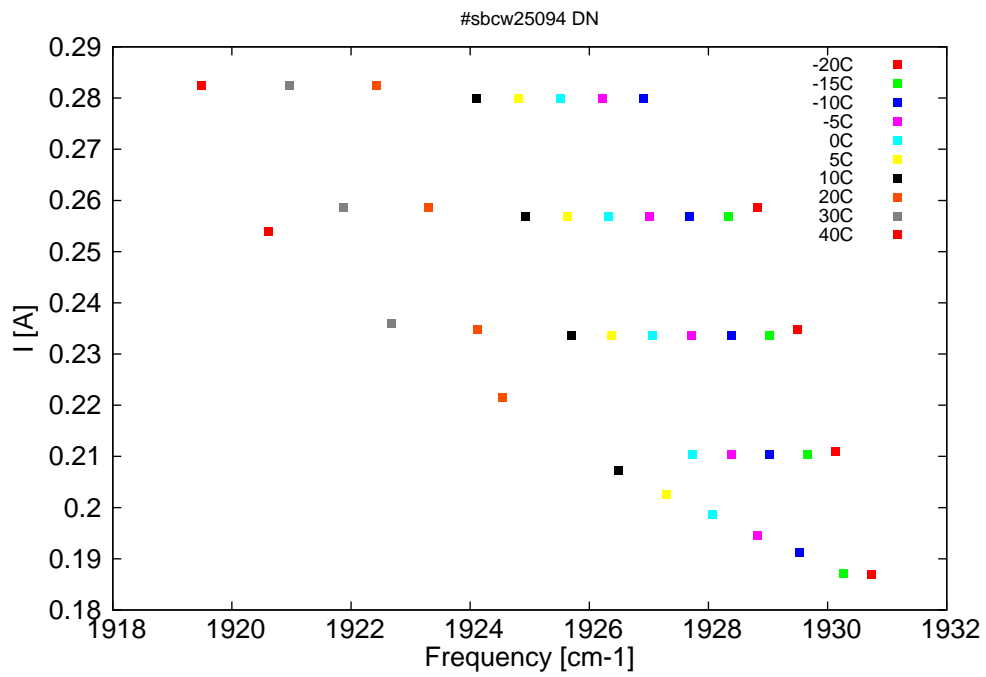


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5179.4	1930.7	0.7	-20	11.26	0.187
5181	1930.1	9.3	-20	11.47	0.211
5182.7	1929.5	19.7	-20	11.71	0.235
5184.5	1928.8	30.6	-20	11.96	0.259
5180.6	1930.3	0.4	-15	11.25	0.187
5182.2	1929.7	8.2	-15	11.45	0.21
5184	1929	17.6	-15	11.69	0.234
5185.8	1928.3	27.6	-15	11.95	0.257
5182.6	1929.5	0.3	-10	11.25	0.191
5184	1929	6.4	-10	11.42	0.21
5185.7	1928.4	15.2	-10	11.66	0.234
5187.6	1927.7	24.7	-10	11.92	0.257
5189.7	1926.9	33.6	-10	12.21	0.28
5184.5	1928.8	0	-5	11.25	0.195
5185.7	1928.4	4.2	-5	11.39	0.21
5187.5	1927.7	12.6	-5	11.63	0.234
5189.4	1927	21.2	-5	11.9	0.257
5191.5	1926.2	29.6	-5	12.19	0.28
5186.6	1928.1	0.2	0	11.25	0.199
5187.4	1927.7	3.2	0	11.36	0.21
5189.3	1927.1	10.8	0	11.6	0.234
5191.2	1926.3	19.2	0	11.87	0.257
5193.4	1925.5	27	0	12.17	0.28
5188.6	1927.3	0.3	5	11.26	0.203
5191.1	1926.4	9.3	5	11.58	0.234
5193.1	1925.6	16.9	5	11.85	0.257
5195.3	1924.8	24.2	5	12.15	0.28
5190.8	1926.5	0.1	10	11.28	0.207
5192.9	1925.7	6.7	10	11.55	0.234
5195	1924.9	13.7	10	11.83	0.257
5197.2	1924.1	20.4	10	12.13	0.28
5196.1	1924.5	0.2	20	11.35	0.222
5197.2	1924.1	2.9	20	11.49	0.235
5199.4	1923.3	8.7	20	11.77	0.259
5201.8	1922.4	14.3	20	12.07	0.283
5201.1	1922.7	0.4	30	11.47	0.236
5203.2	1921.9	4.3	30	11.73	0.259
5205.7	1921	8.7	30	12.03	0.283
5206.7	1920.6	0.2	40	11.65	0.254
5209.7	1919.5	3.6	40	12	0.283

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

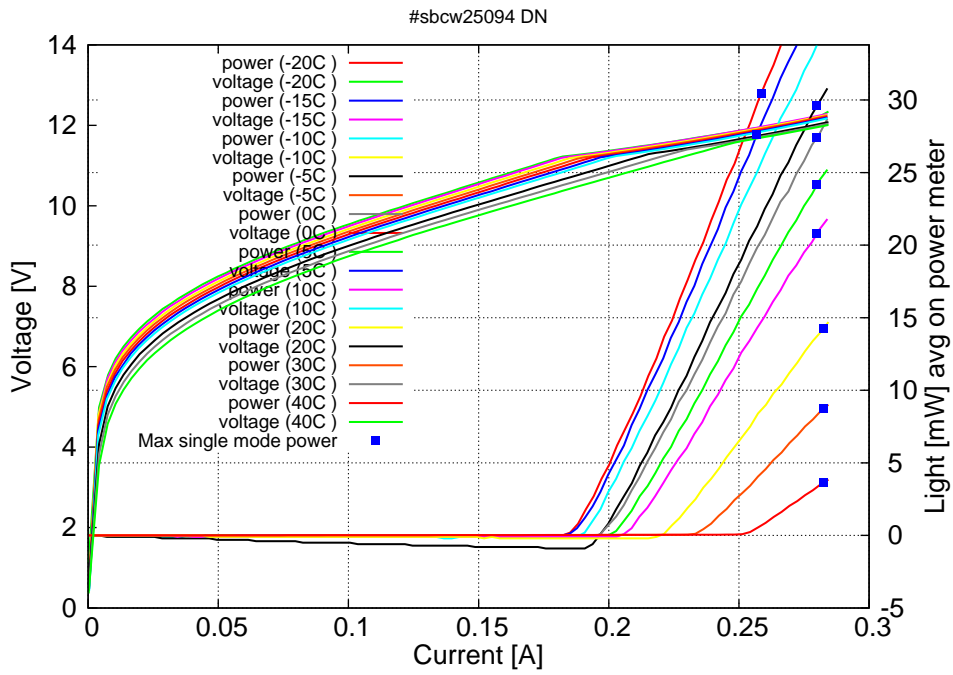


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.18A$  /  $V_{th}=11.2V$  (2-wires measurements). Maximum operation current: 0.26A between -20C and -15C, 0.28A between -10C and 10C, 0.285A between 20C and 40C.

Figure 3: spectra at different temperatures for various DC currents

