

**Datasheet for #sbcw25531 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

**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.

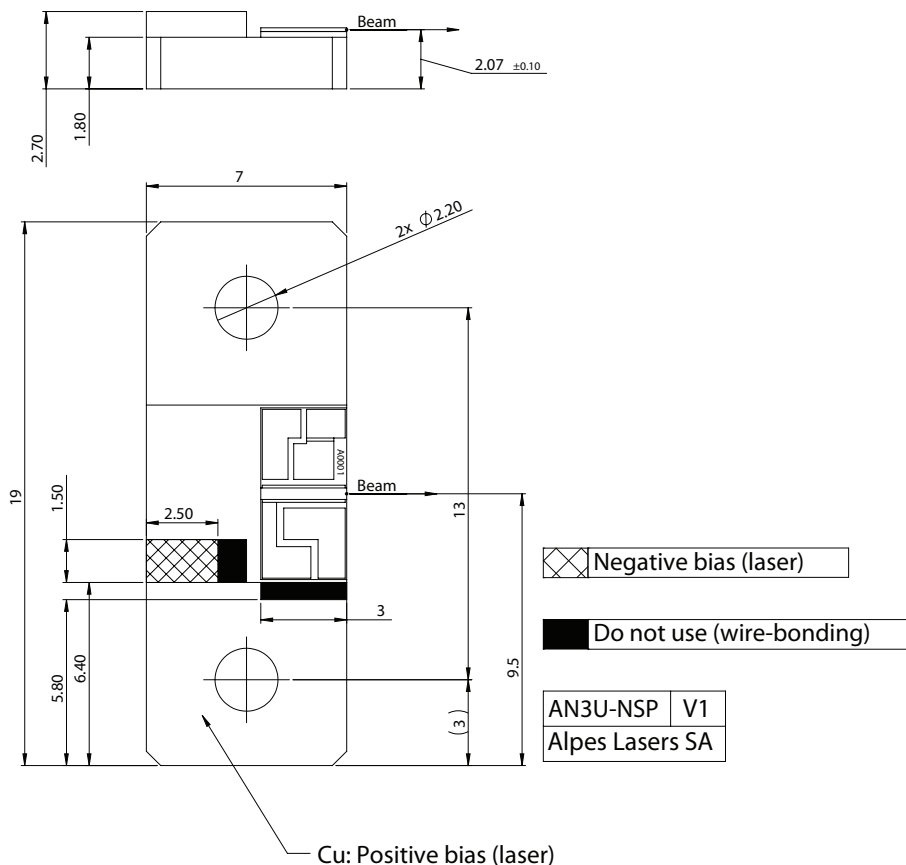


Figure 1: Mechanical and electrical interface for #sbcw25531 DN

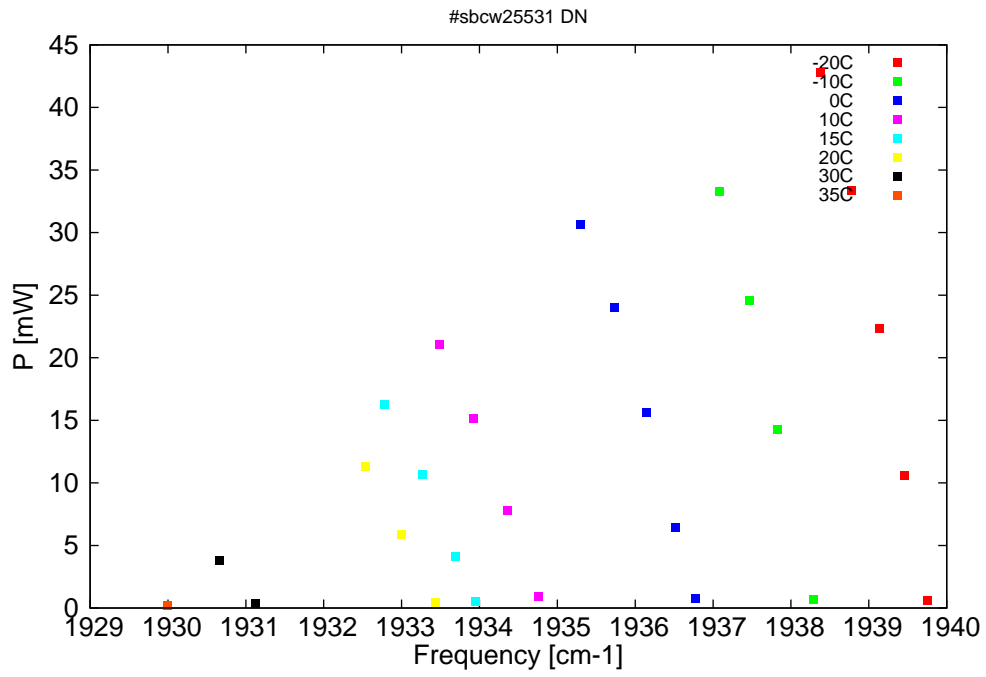


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

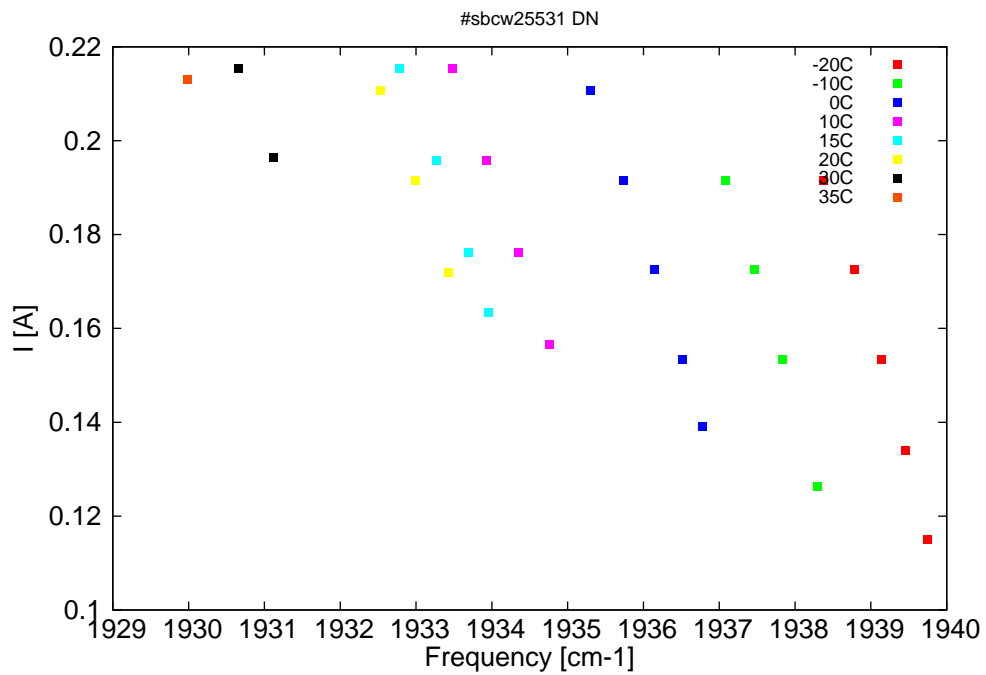


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5155.3	1939.7	0.6	-20	7.95	0.115
5156.1	1939.5	10.6	-20	8.14	0.134
5156.9	1939.1	22.4	-20	8.33	0.153
5157.9	1938.8	33.4	-20	8.54	0.173
5159	1938.4	42.8	-20	8.78	0.192
5159.2	1938.3	0.7	-10	8.02	0.126
5160.4	1937.8	14.2	-10	8.28	0.153
5161.4	1937.5	24.6	-10	8.49	0.173
5162.4	1937.1	33.3	-10	8.71	0.192
5163.2	1936.8	0.8	0	8.1	0.139
5163.9	1936.5	6.4	0	8.23	0.153
5164.9	1936.1	15.6	0	8.43	0.173
5166	1935.7	24	0	8.65	0.192
5167.2	1935.3	30.7	0	8.88	0.211
5168.6	1934.8	1	10	8.2	0.157
5169.7	1934.4	7.8	10	8.38	0.176
5170.8	1933.9	15.1	10	8.6	0.196
5172	1933.5	21.1	10	8.83	0.215
5170.8	1934	0.5	15	8.25	0.163
5171.5	1933.7	4.1	15	8.36	0.176
5172.6	1933.3	10.7	15	8.57	0.196
5173.9	1932.8	16.3	15	8.8	0.215
5172.2	1933.4	0.5	20	8.34	0.172
5173.3	1933	5.9	20	8.52	0.192
5174.5	1932.5	11.3	20	8.74	0.211
5178.3	1931.1	0.3	30	8.53	0.197
5179.6	1930.7	3.8	30	8.72	0.215
5181.4	1930	0.2	35	8.69	0.213

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

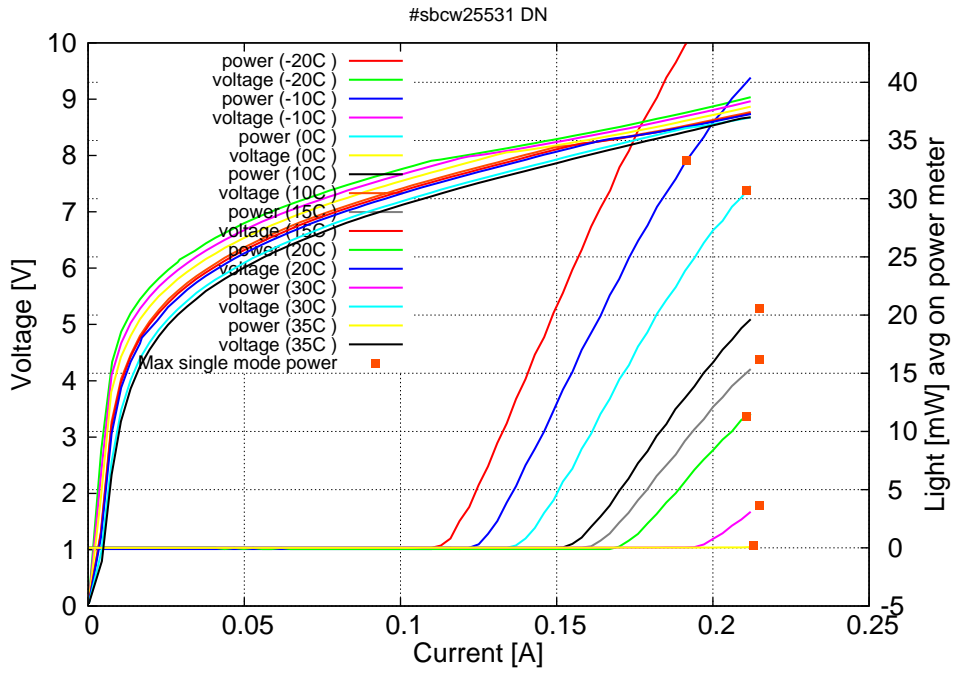


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.12A$  /  $V_{th}=7.9V$  (2-wires measurements). Maximum operation current: 0.195A between -20C and -10C, 0.21A at 0C, 0.215A between 10C and 35C.

Figure 3: spectra at different temperatures for various DC currents

