

Datasheet for #sbcw18206 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.

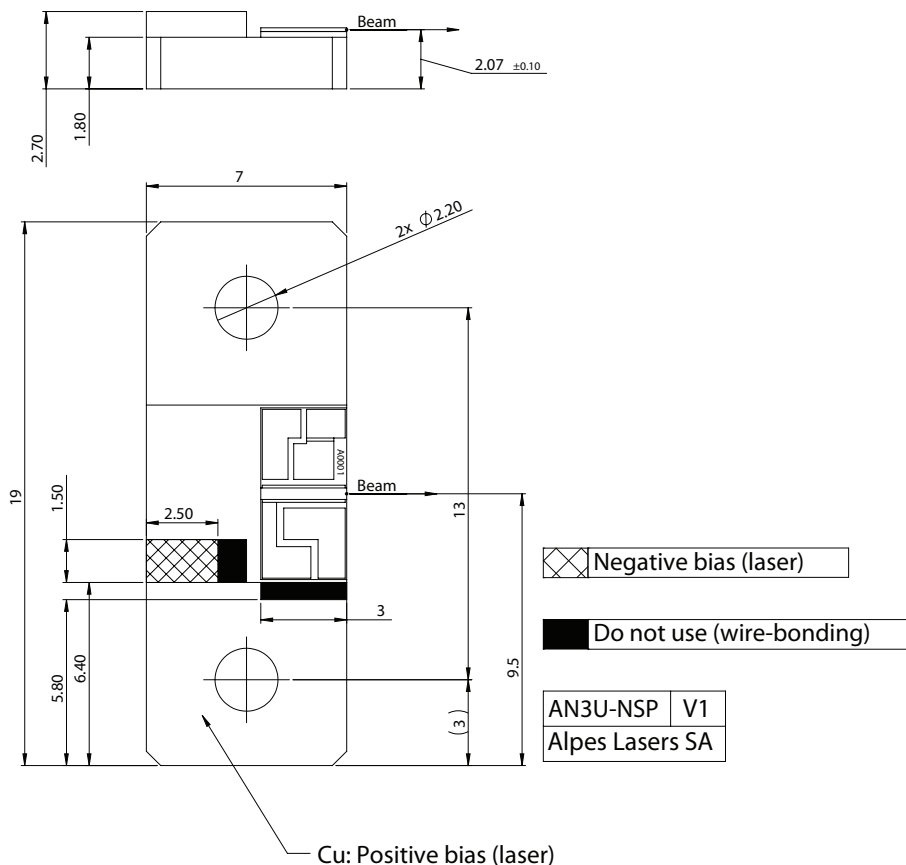


Figure 1: Mechanical and electrical interface for #sbcw18206 DN

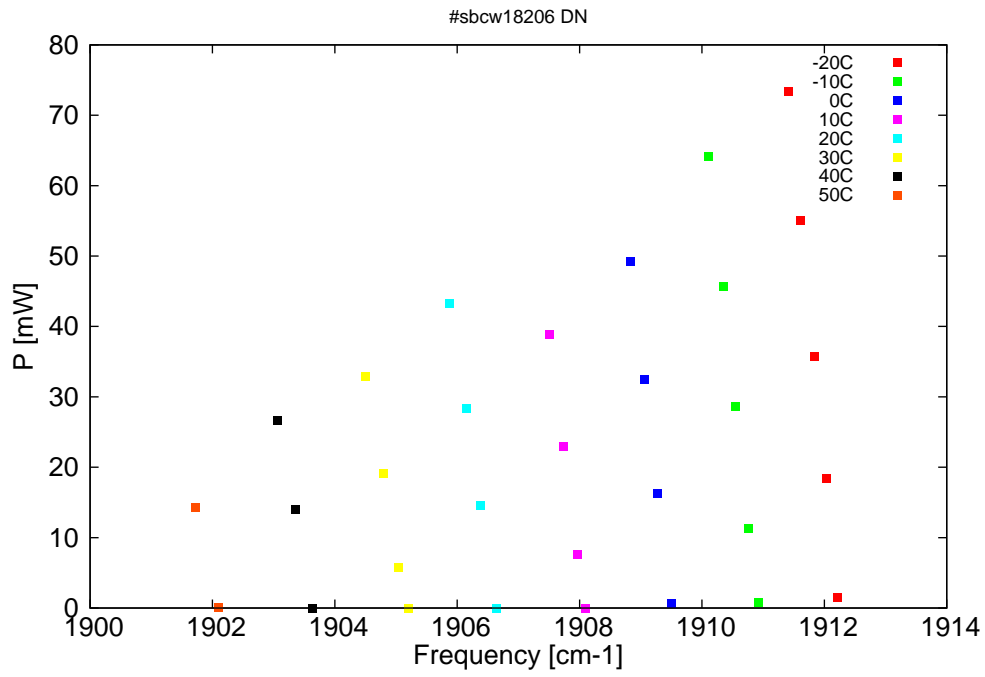


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

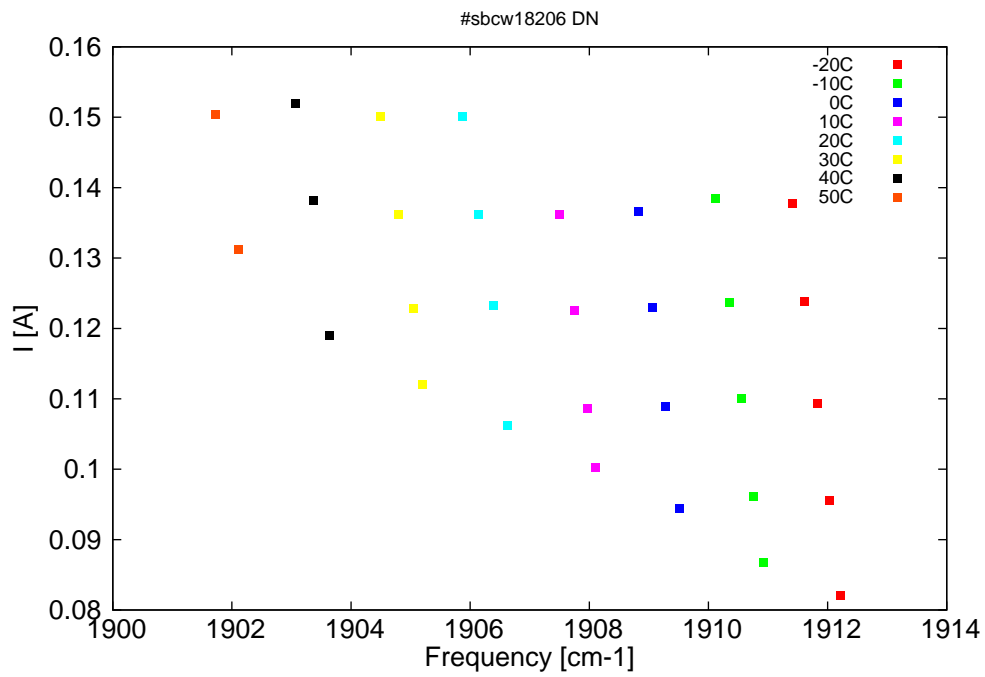


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5229.5	1912.2	1.6	-20	7.45	0.082
5230.1	1912	18.5	-20	7.6	0.096
5230.6	1911.8	35.7	-20	7.74	0.109
5231.2	1911.6	55	-20	7.9	0.124
5231.7	1911.4	73.4	-20	8.05	0.138
5233.1	1910.9	0.8	-10	7.47	0.087
5233.5	1910.8	11.2	-10	7.57	0.096
5234.1	1910.5	28.6	-10	7.72	0.11
5234.6	1910.3	45.6	-10	7.87	0.124
5235.3	1910.1	64.1	-10	8.04	0.138
5236.9	1909.5	0.7	0	7.52	0.094
5237.6	1909.3	16.3	0	7.69	0.109
5238.2	1909.1	32.5	0	7.84	0.123
5238.8	1908.8	49.2	0	8	0.137
5240.8	1908.1	0	10	7.53	0.1
5241.2	1908	7.6	10	7.66	0.109
5241.8	1907.7	23	10	7.82	0.123
5242.5	1907.5	38.9	10	7.98	0.136
5244.8	1906.6	0	20	7.63	0.106
5245.5	1906.4	14.6	20	7.81	0.123
5246.2	1906.1	28.4	20	7.96	0.136
5246.9	1905.9	43.2	20	8.14	0.15
5248.8	1905.2	0	30	7.7	0.112
5249.2	1905	5.8	30	7.78	0.123
5249.9	1904.8	19	30	7.94	0.136
5250.7	1904.5	32.9	30	8.12	0.15
5253.1	1903.6	0	40	7.78	0.119
5253.9	1903.4	13.9	40	7.95	0.138
5254.7	1903.1	26.6	40	8.13	0.152
5257.3	1902.1	0.1	50	7.87	0.131
5258.4	1901.7	14.2	50	8.09	0.15

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

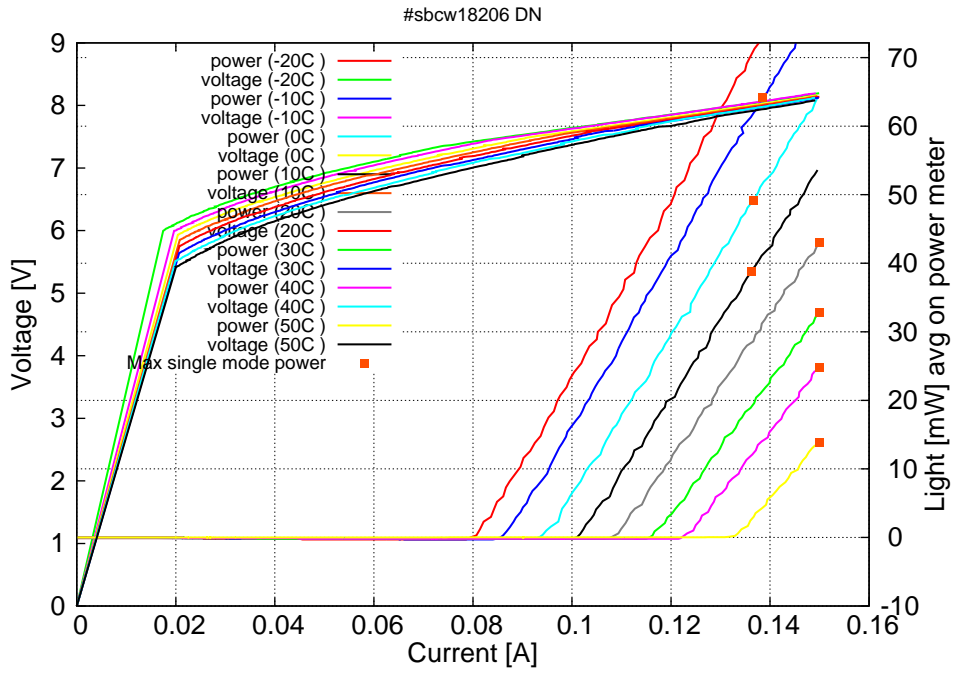


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.4V$ (2-wires measurements). Maximum operation current: 0.14A between -20C and 10C, 0.15A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

