

Datasheet for #sbcw19806 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 bias and positive bias on the specific zones drawn below. 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 #sbcw19806 DN (please note that AlN submount numbering is A0R13)

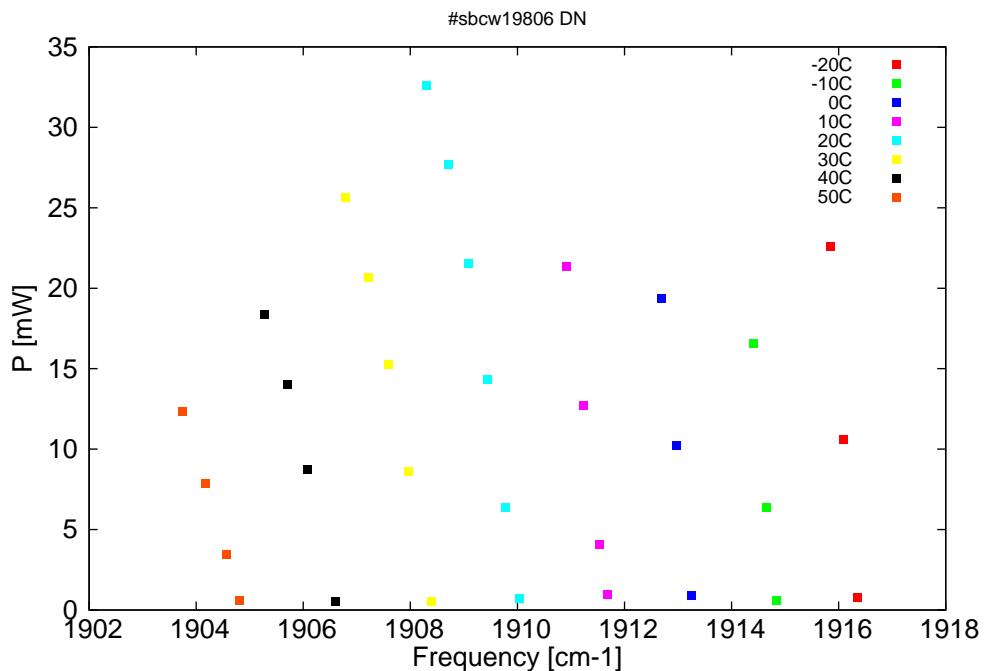


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

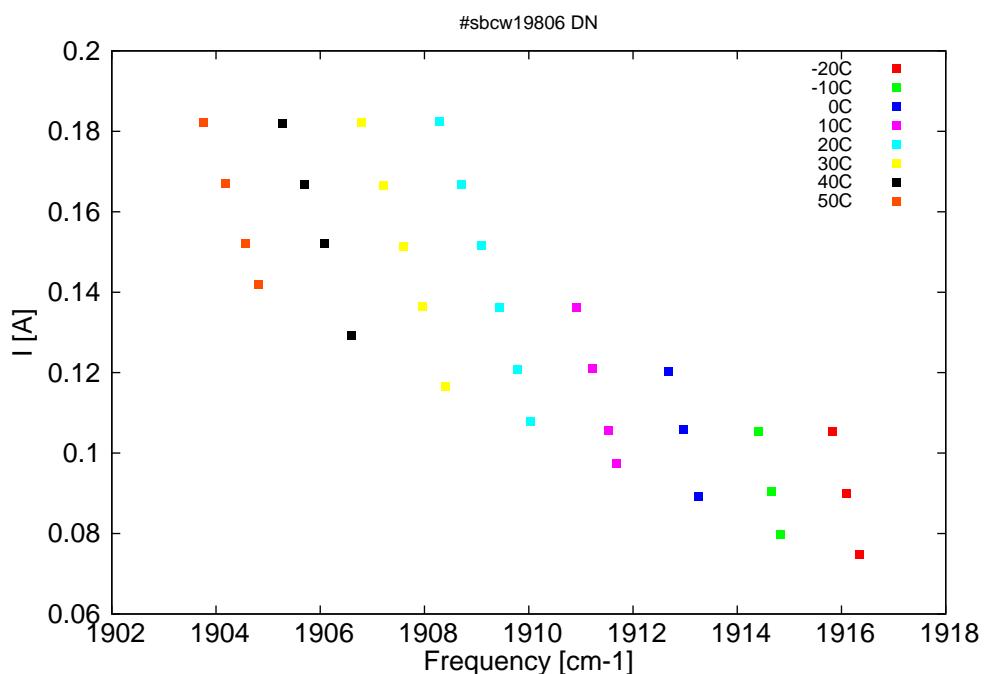


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5218.3	1916.3	0.8	-20	7.55	0.075
5218.9	1916.1	10.6	-20	7.73	0.09
5219.6	1915.8	22.6	-20	7.9	0.105
5222.4	1914.8	0.6	-10	7.55	0.08
5222.9	1914.7	6.4	-10	7.67	0.09
5223.5	1914.4	16.6	-10	7.84	0.105
5226.7	1913.3	0.9	0	7.6	0.089
5227.5	1913	10.2	0	7.79	0.106
5228.2	1912.7	19.4	0	7.95	0.12
5231	1911.7	1	10	7.64	0.097
5231.4	1911.5	4.1	10	7.73	0.106
5232.2	1911.2	12.7	10	7.9	0.121
5233.1	1910.9	21.3	10	8.07	0.136
5235.5	1910	0.7	20	7.7	0.108
5236.2	1909.8	6.4	20	7.84	0.121
5237.1	1909.4	14.3	20	8.01	0.136
5238.1	1909.1	21.6	20	8.19	0.152
5239.1	1908.7	27.7	20	8.36	0.167
5240.3	1908.3	32.6	20	8.55	0.182
5240	1908.4	0.6	30	7.74	0.116
5241.2	1908	8.6	30	7.95	0.136
5242.2	1907.6	15.2	30	8.12	0.151
5243.2	1907.2	20.6	30	8.29	0.167
5244.4	1906.8	25.7	30	8.48	0.182
5244.9	1906.6	0.5	40	7.83	0.129
5246.4	1906.1	8.7	40	8.07	0.152
5247.4	1905.7	14	40	8.23	0.167
5248.6	1905.3	18.4	40	8.41	0.182
5249.8	1904.8	0.6	50	7.92	0.142
5250.5	1904.6	3.5	50	8.02	0.152
5251.6	1904.2	7.9	50	8.18	0.167
5252.8	1903.8	12.4	50	8.34	0.182

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

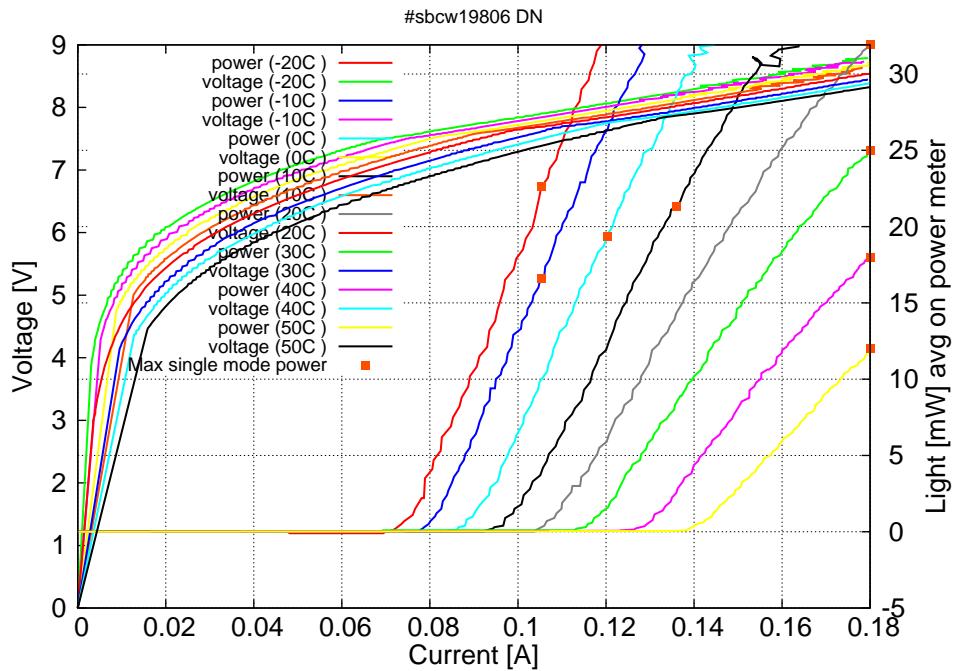


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.105A between -20C and -10C, 0.12A at 0C, 0.135A at 10C, 0.18A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

