

Datasheet for #sbcw19375 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 #sbcw19375 DN

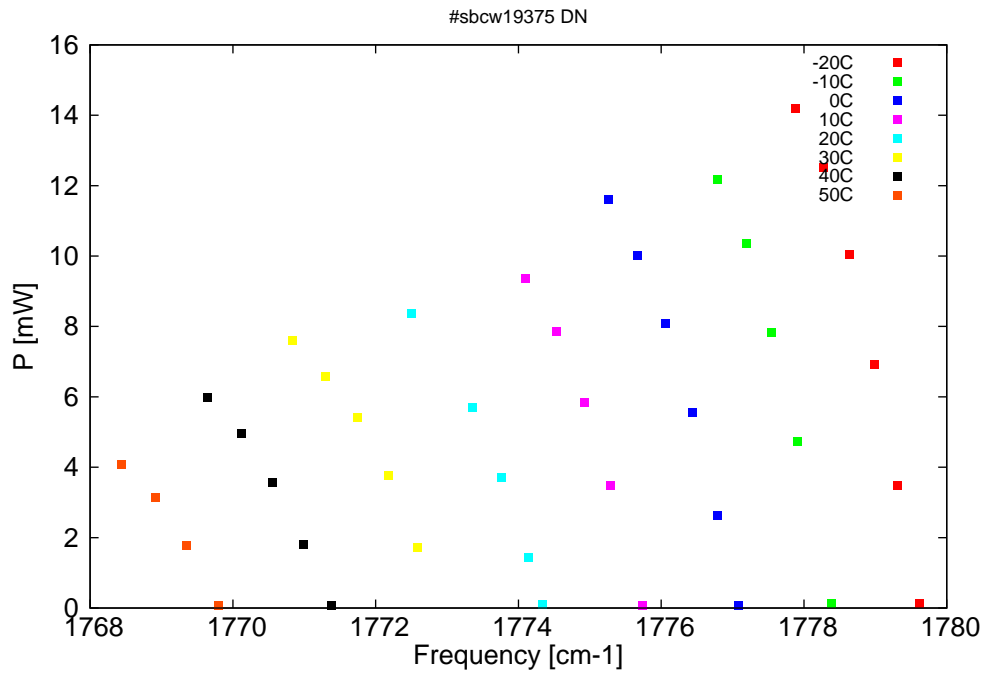


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

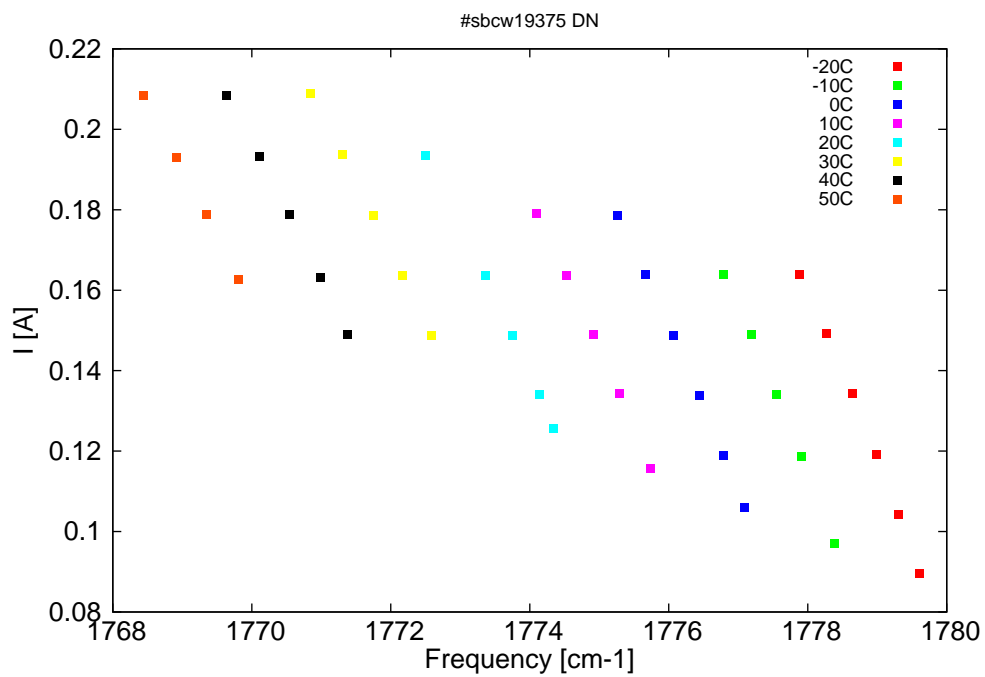


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5619.2	1779.6	0.1	-20	10	0.09
5620.2	1779.3	3.5	-20	10.28	0.104
5621.2	1779	6.9	-20	10.55	0.119
5622.3	1778.6	10	-20	10.81	0.134
5623.4	1778.3	12.5	-20	11.06	0.149
5624.7	1777.9	14.2	-20	11.31	0.164
5623.1	1778.4	0.1	-10	9.98	0.097
5624.6	1777.9	4.7	-10	10.37	0.119
5625.7	1777.5	7.8	-10	10.63	0.134
5626.9	1777.2	10.4	-10	10.88	0.149
5628.1	1776.8	12.2	-10	11.12	0.164
5627.2	1777.1	0.1	0	9.98	0.106
5628.1	1776.8	2.6	0	10.21	0.119
5629.2	1776.4	5.5	0	10.46	0.134
5630.4	1776.1	8.1	0	10.7	0.149
5631.7	1775.7	10	0	10.94	0.164
5633	1775.3	11.6	0	11.17	0.179
5631.5	1775.7	0.1	10	10	0.116
5632.9	1775.3	3.5	10	10.31	0.134
5634	1774.9	5.8	10	10.54	0.149
5635.3	1774.5	7.9	10	10.77	0.164
5636.7	1774.1	9.4	10	11	0.179
5635.9	1774.3	0.1	20	10.01	0.126
5636.5	1774.1	1.4	20	10.15	0.134
5637.8	1773.8	3.7	20	10.38	0.149
5639	1773.4	5.7	20	10.6	0.164
5641.8	1772.5	8.4	20	11.05	0.193
5641.5	1772.6	1.7	30	10.22	0.149
5642.8	1772.2	3.8	30	10.45	0.164
5644.1	1771.8	5.4	30	10.66	0.179
5645.6	1771.3	6.6	30	10.88	0.194
5647	1770.8	7.6	30	11.09	0.209
5645.3	1771.4	0.1	40	10.08	0.149
5646.6	1771	1.8	40	10.29	0.163
5648	1770.5	3.6	40	10.51	0.179
5649.4	1770.1	5	40	10.71	0.193
5650.9	1769.6	6	40	10.92	0.209
5650.3	1769.8	0.1	50	10.13	0.163
5651.8	1769.3	1.8	50	10.35	0.179
5653.2	1768.9	3.1	50	10.55	0.193
5654.7	1768.4	4.1	50	10.75	0.208

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

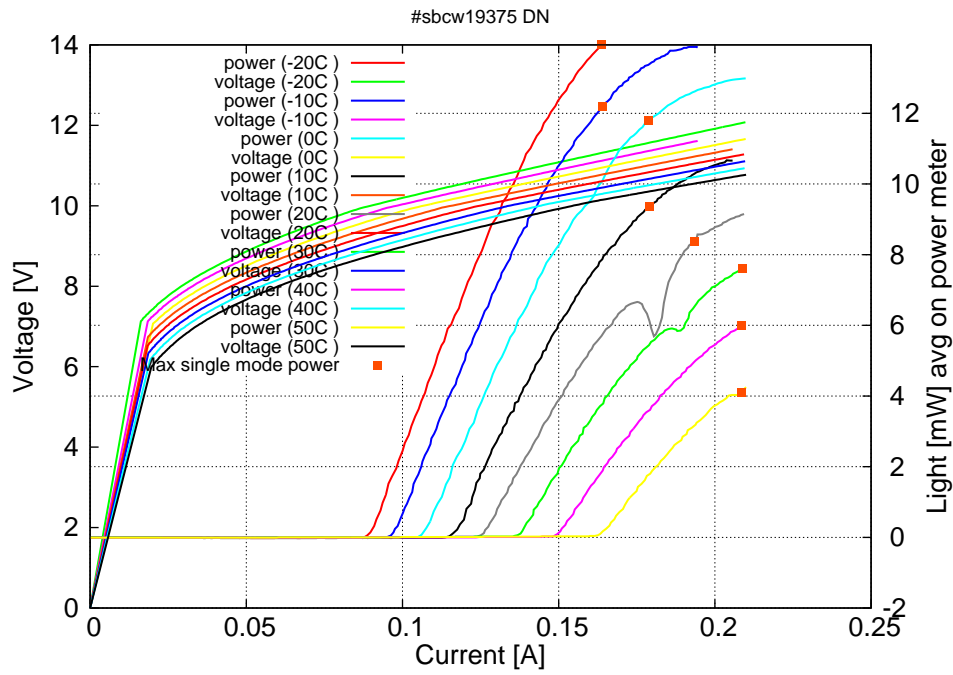


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=10.0V$ (2-wires measurements). Maximum operation current: 0.165A between -20C and -10C, 0.18A between 0C and 10C, 0.195A at 20C, 0.21A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

