

Datasheet for #sbcw19374 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 #sbcw19374 DN

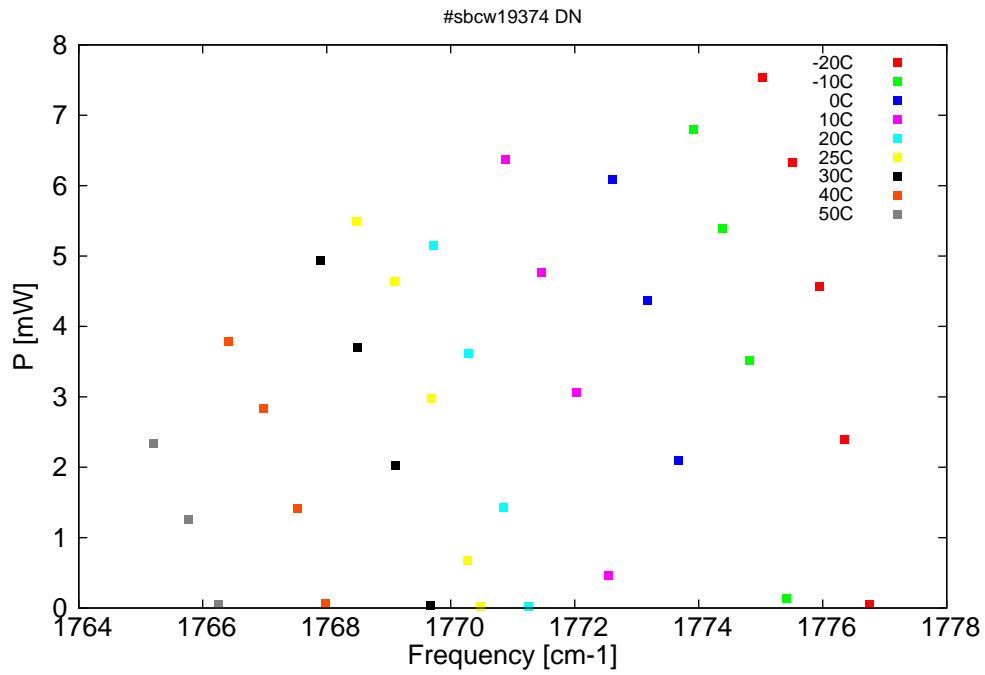


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

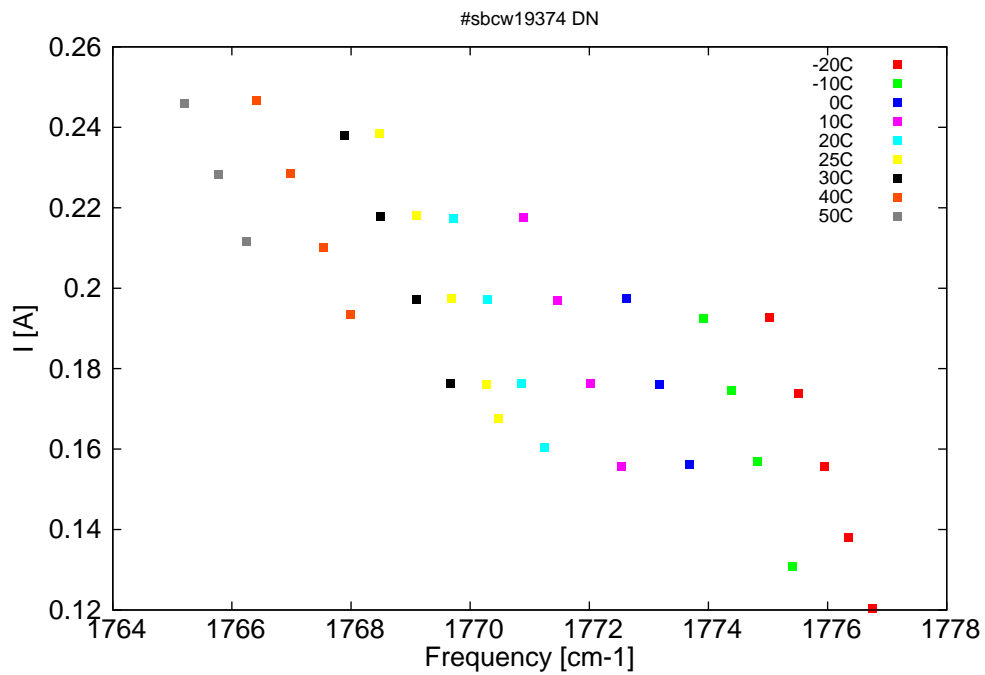


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5628.3	1776.7	0.1	-20	10.25	0.12
5629.5	1776.4	2.4	-20	10.53	0.138
5630.8	1775.9	4.6	-20	10.8	0.156
5632.2	1775.5	6.3	-20	11.05	0.174
5633.7	1775	7.5	-20	11.3	0.193
5632.5	1775.4	0.1	-10	10.22	0.131
5634.4	1774.8	3.5	-10	10.6	0.157
5635.8	1774.4	5.4	-10	10.85	0.174
5637.3	1773.9	6.8	-10	11.09	0.193
5638	1773.7	2.1	0	10.43	0.156
5639.6	1773.2	4.4	0	10.7	0.176
5641.4	1772.6	6.1	0	10.98	0.197
5641.6	1772.5	0.5	10	10.25	0.156
5643.3	1772	3.1	10	10.51	0.176
5645	1771.5	4.8	10	10.78	0.197
5646.9	1770.9	6.4	10	11.03	0.218
5645.7	1771.3	0	20	10.15	0.16
5647	1770.9	1.4	20	10.35	0.176
5648.8	1770.3	3.6	20	10.61	0.197
5650.6	1769.7	5.2	20	10.86	0.217
5648.2	1770.5	0	25	10.16	0.168
5648.9	1770.3	0.7	25	10.27	0.176
5650.7	1769.7	3	25	10.53	0.198
5652.6	1769.1	4.6	25	10.78	0.218
5654.6	1768.5	5.5	25	11.01	0.238
5650.8	1769.7	0	30	10.19	0.176
5652.6	1769.1	2	30	10.44	0.197
5654.5	1768.5	3.7	30	10.69	0.218
5656.4	1767.9	4.9	30	10.92	0.238
5656.2	1768	0.1	40	10.22	0.193
5657.6	1767.5	1.4	40	10.4	0.21
5659.4	1767	2.8	40	10.62	0.228
5661.2	1766.4	3.8	40	10.82	0.247
5661.7	1766.3	0.1	50	10.27	0.212
5663.3	1765.8	1.3	50	10.45	0.228
5665.1	1765.2	2.3	50	10.64	0.246

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

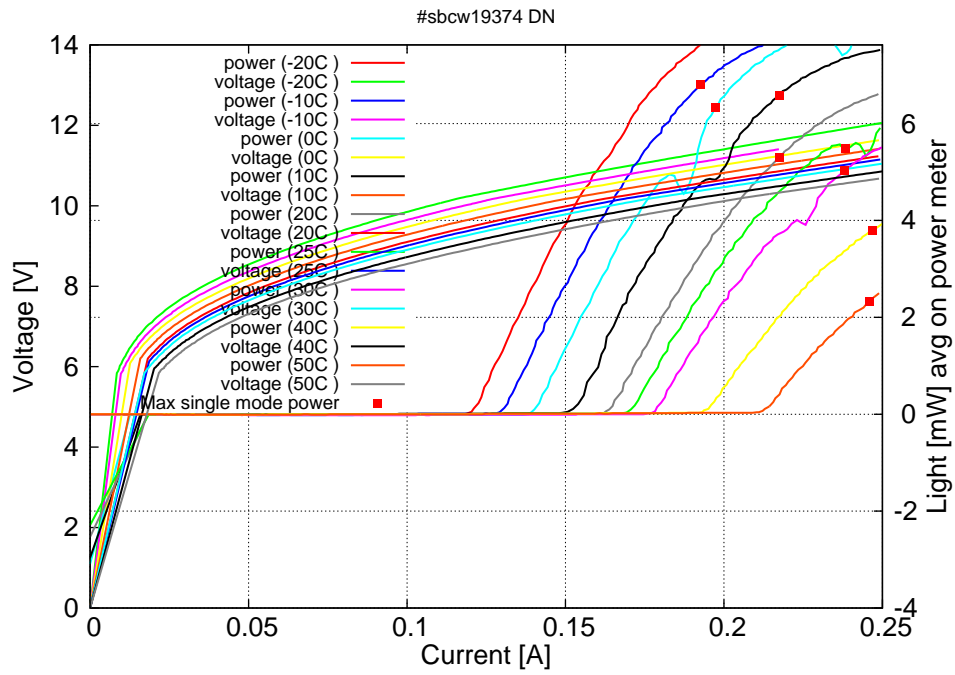


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=10.2V$ (2-wires measurements). Maximum operation current: 0.195A between -20C and -10C, 0.20A at 0C, 0.22A between 10C and 20C, 0.24A between 25C and 30C, 0.25A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

