

Datasheet for #sbcw19573 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 #sbcw19573 DN

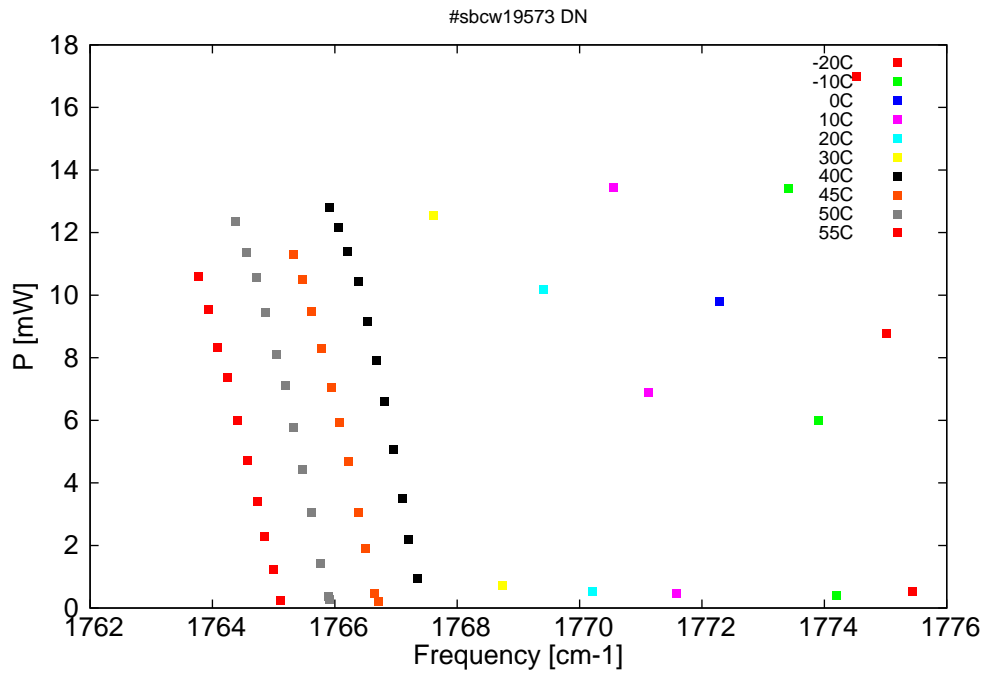


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

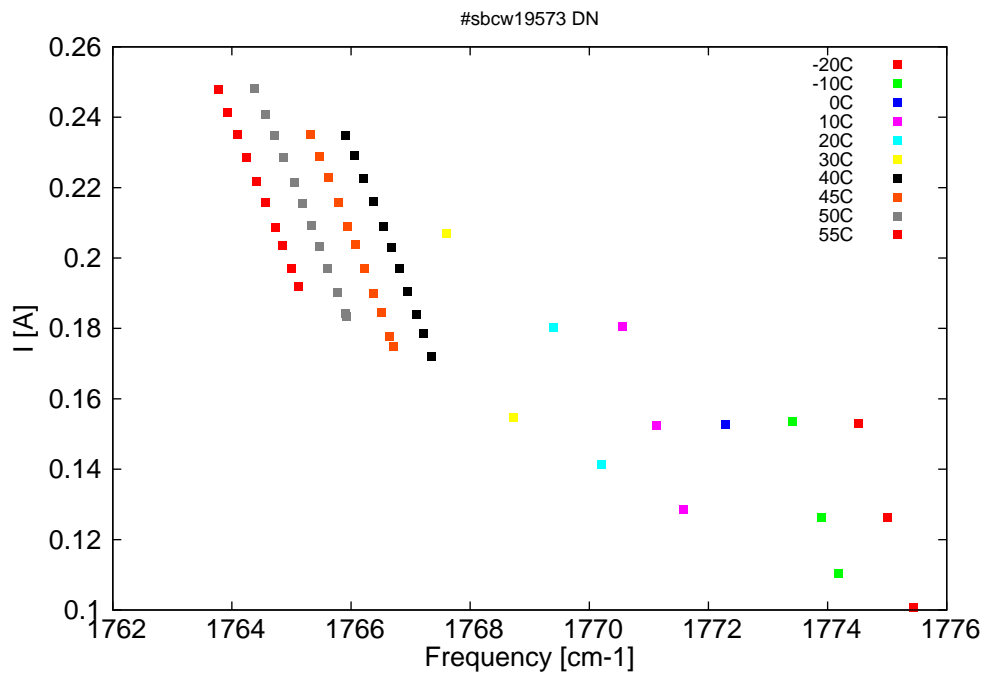


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5632.4	1775.4	0.5	-20	8.9	0.101
5633.8	1775	8.8	-20	9.2	0.126
5635.3	1774.5	17	-20	9.49	0.153
5636.4	1774.2	0.4	-10	8.89	0.11
5637.3	1773.9	6	-10	9.07	0.126
5638.9	1773.4	13.4	-10	9.36	0.154
5642.5	1772.3	9.8	0	9.23	0.153
5644.7	1771.6	0.4	10	8.85	0.129
5646.1	1771.1	6.9	10	9.11	0.152
5647.9	1770.6	13.5	10	9.38	0.181
5649	1770.2	0.5	20	8.87	0.141
5651.6	1769.4	10.2	20	9.26	0.18
5653.8	1768.7	0.7	30	8.91	0.155
5657.4	1767.6	12.6	30	9.4	0.207
5658.2	1767.3	1	40	8.95	0.172
5658.6	1767.2	2.2	40	9.01	0.179
5659	1767.1	3.5	40	9.06	0.184
5659.5	1767	5.1	40	9.12	0.191
5659.9	1766.8	6.6	40	9.17	0.197
5660.3	1766.7	7.9	40	9.23	0.203
5660.8	1766.5	9.2	40	9.28	0.209
5661.3	1766.4	10.4	40	9.34	0.216
5661.8	1766.2	11.4	40	9.4	0.223
5662.3	1766.1	12.2	40	9.45	0.229
5662.8	1765.9	12.8	40	9.5	0.235
5660.2	1766.7	0.2	45	8.92	0.175
5660.4	1766.7	0.5	45	8.94	0.178
5660.9	1766.5	1.9	45	9	0.184
5661.3	1766.4	3.1	45	9.05	0.19
5661.8	1766.2	4.7	45	9.12	0.197
5662.3	1766.1	5.9	45	9.17	0.204
5662.7	1765.9	7	45	9.22	0.209
5663.2	1765.8	8.3	45	9.28	0.216
5663.7	1765.6	9.5	45	9.34	0.223
5664.2	1765.5	10.5	45	9.39	0.229
5664.7	1765.3	11.3	45	9.45	0.235
5662.8	1765.9	0.3	50	8.95	0.183
5662.8	1765.9	0.4	50	8.95	0.184
5663.3	1765.8	1.4	50	9.01	0.19
5663.8	1765.6	3.1	50	9.07	0.197
5664.2	1765.5	4.4	50	9.12	0.203
5664.7	1765.3	5.8	50	9.17	0.209
5665.1	1765.2	7.1	50	9.23	0.215
5665.6	1765	8.1	50	9.28	0.221
5666.1	1764.9	9.5	50	9.34	0.228
5666.6	1764.7	10.6	50	9.39	0.235
5667.1	1764.6	11.3	50	9.44	0.241
5667.7	1764.4	12.4	50	9.51	0.248
5665.4	1765.1	0.3	55	8.98	0.192

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5665.7	1765	1.2	55	9.02	0.197
5666.2	1764.9	2.3	55	9.08	0.203
5666.6	1764.7	3.4	55	9.12	0.209
5667.1	1764.6	4.7	55	9.18	0.216
5667.6	1764.4	6	55	9.24	0.222
5668.1	1764.2	7.4	55	9.29	0.229
5668.7	1764.1	8.3	55	9.35	0.235
5669.1	1763.9	9.5	55	9.4	0.241
5669.7	1763.8	10.6	55	9.45	0.248

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

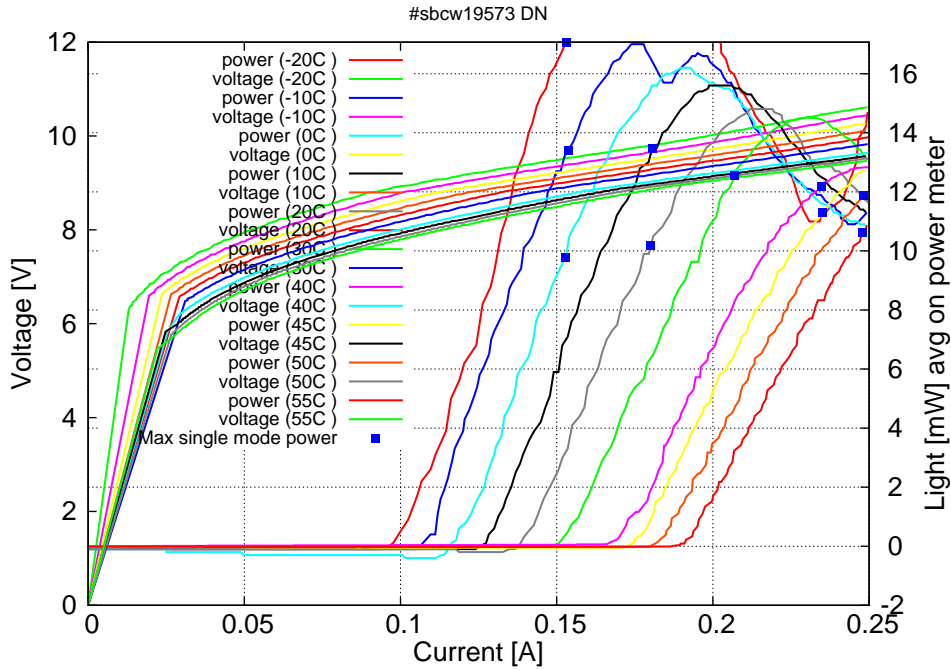


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.155A between -20C and 0C, 0.185A at 10C and 20C, 0.21A at 30C, 0.235 at 40C and 45C, 0.25A at 50C and 55C.

Figure 3: spectra at different temperatures for various DC currents

