

Datasheet for #sbcw19569 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.

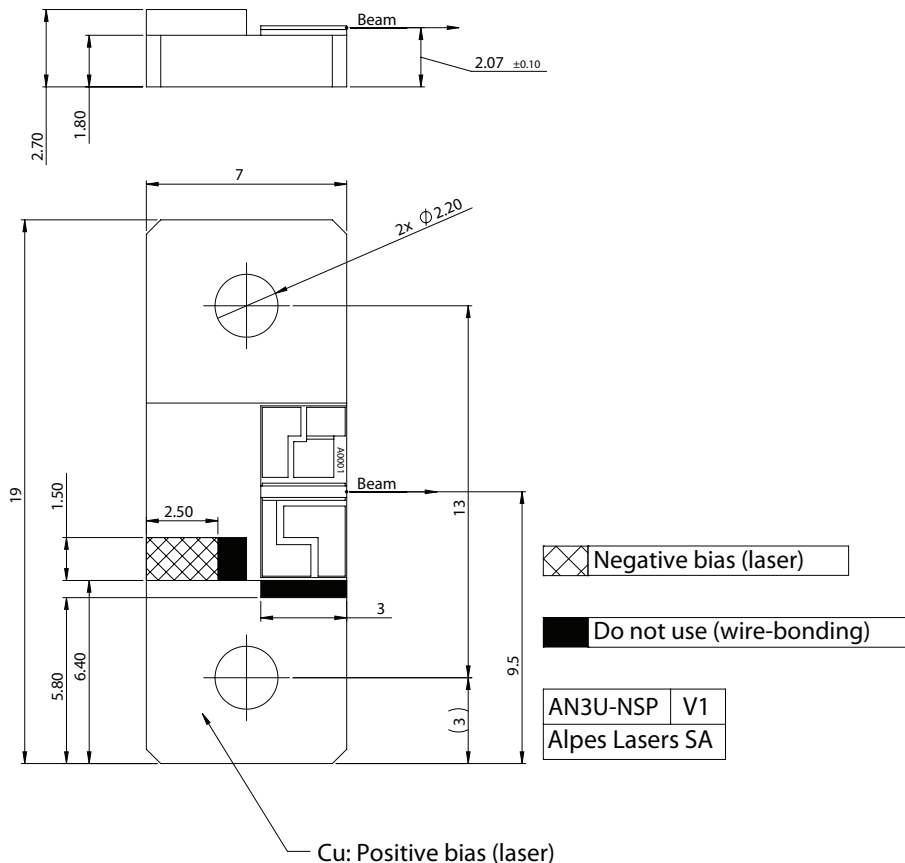


Figure 1: Mechanical and electrical interface for #sbcw19569 DN

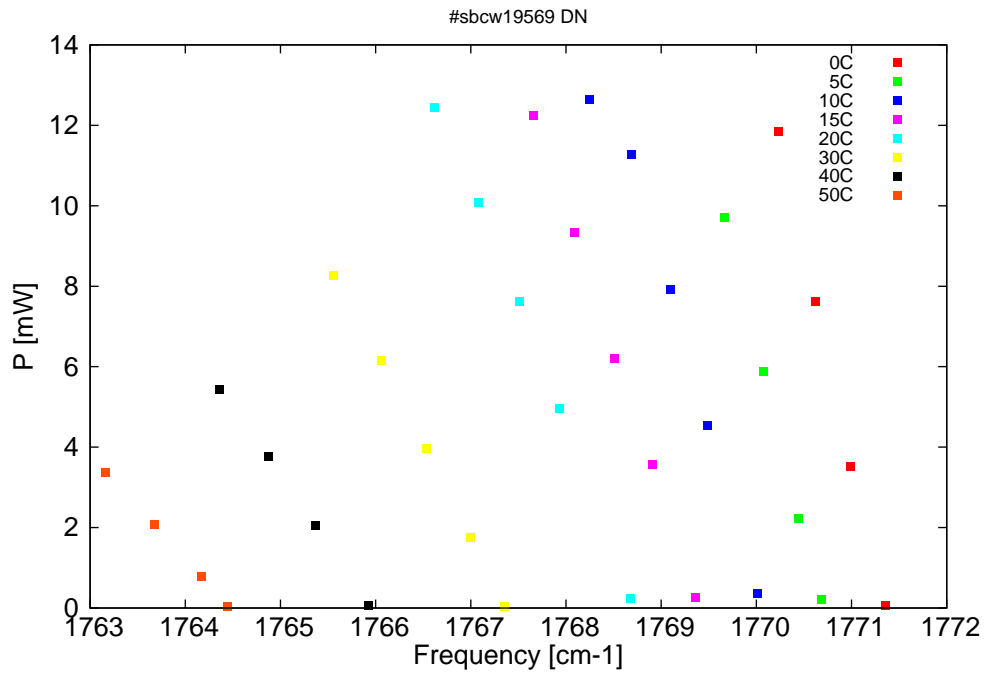


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

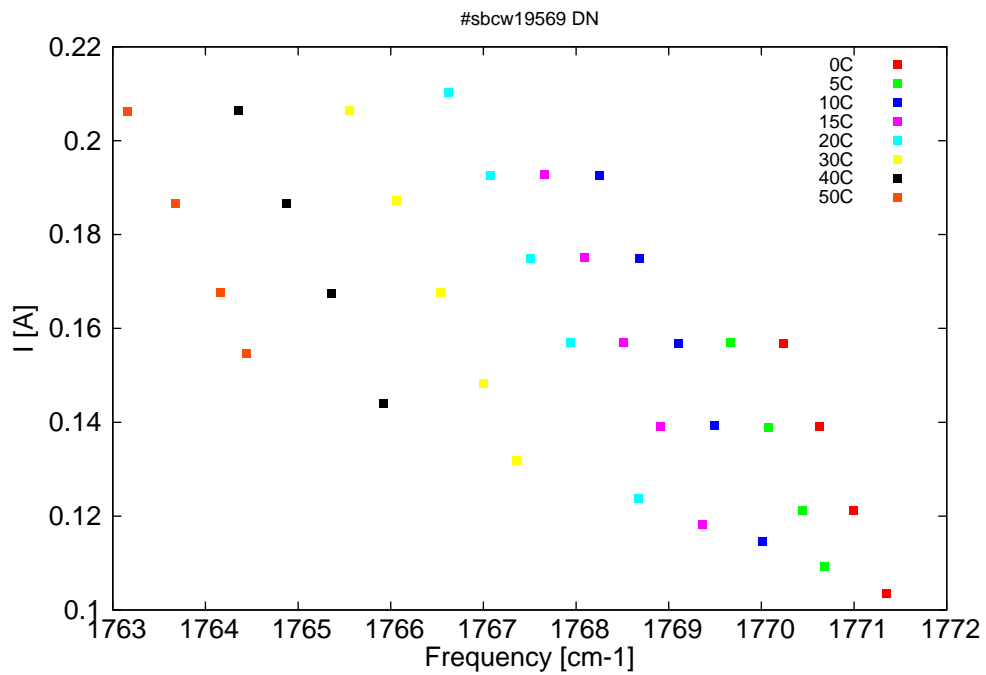


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5645.4	1771.4	0.1	0	9.18	0.104
5646.6	1771	3.5	0	9.44	0.121
5647.7	1770.6	7.6	0	9.68	0.139
5649	1770.2	11.9	0	9.91	0.157
5647.5	1770.7	0.2	5	9.2	0.109
5648.3	1770.4	2.2	5	9.37	0.121
5649.5	1770.1	5.9	5	9.61	0.139
5650.8	1769.7	9.7	5	9.84	0.157
5649.7	1770	0.4	10	9.2	0.115
5651.3	1769.5	4.5	10	9.54	0.139
5652.6	1769.1	7.9	10	9.76	0.157
5653.9	1768.7	11.3	10	9.98	0.175
5655.3	1768.2	12.6	10	10.19	0.193
5651.8	1769.4	0.3	15	9.19	0.118
5653.2	1768.9	3.6	15	9.47	0.139
5654.5	1768.5	6.2	15	9.7	0.157
5655.8	1768.1	9.3	15	9.92	0.175
5657.2	1767.7	12.2	15	10.12	0.193
5654	1768.7	0.2	20	9.19	0.124
5656.3	1767.9	5	20	9.63	0.157
5657.7	1767.5	7.6	20	9.85	0.175
5659.1	1767.1	10.1	20	10.05	0.193
5660.5	1766.6	12.4	20	10.25	0.21
5658.2	1767.4	0	30	9.17	0.132
5659.3	1767	1.8	30	9.37	0.148
5660.8	1766.5	4	30	9.61	0.168
5662.3	1766.1	6.2	30	9.83	0.187
5663.9	1765.6	8.3	30	10.05	0.207
5662.8	1765.9	0.1	40	9.19	0.144
5664.6	1765.4	2	40	9.47	0.168
5666.1	1764.9	3.8	40	9.69	0.187
5667.8	1764.4	5.4	40	9.91	0.207
5667.5	1764.4	0	50	9.21	0.155
5668.4	1764.2	0.8	50	9.34	0.168
5670	1763.7	2.1	50	9.56	0.187
5671.6	1763.2	3.4	50	9.78	0.206

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

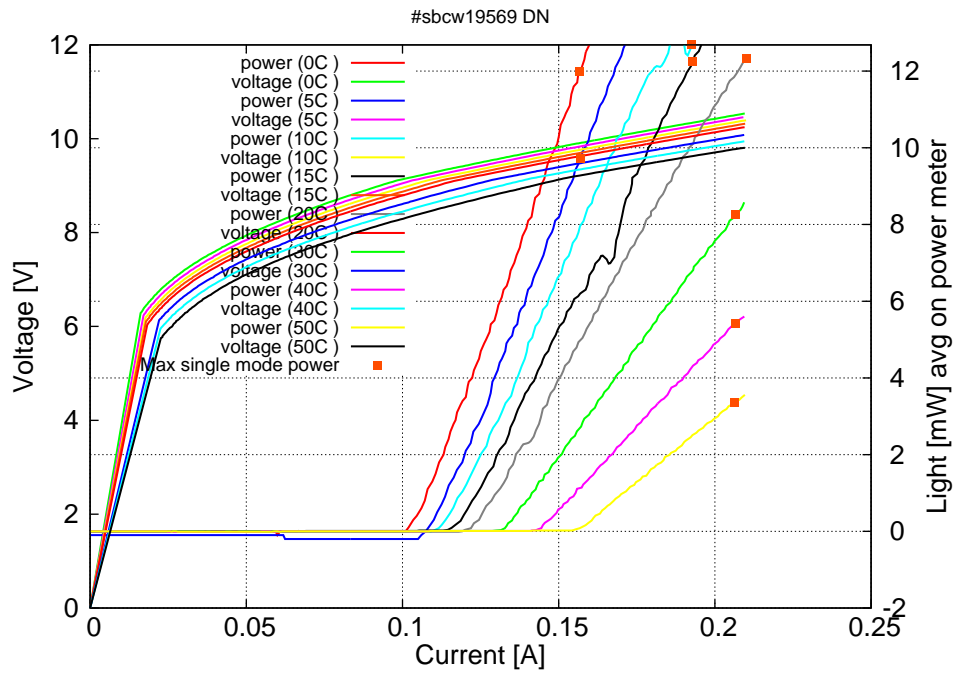


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.10A$ / $V_{th}=9.2V$ (2-wires measurements). Maximum operation current: 0.16A between 0C and 5C 0.195A between 10C and 15C, 0.21A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

