

Datasheet for #sbcw9177 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.

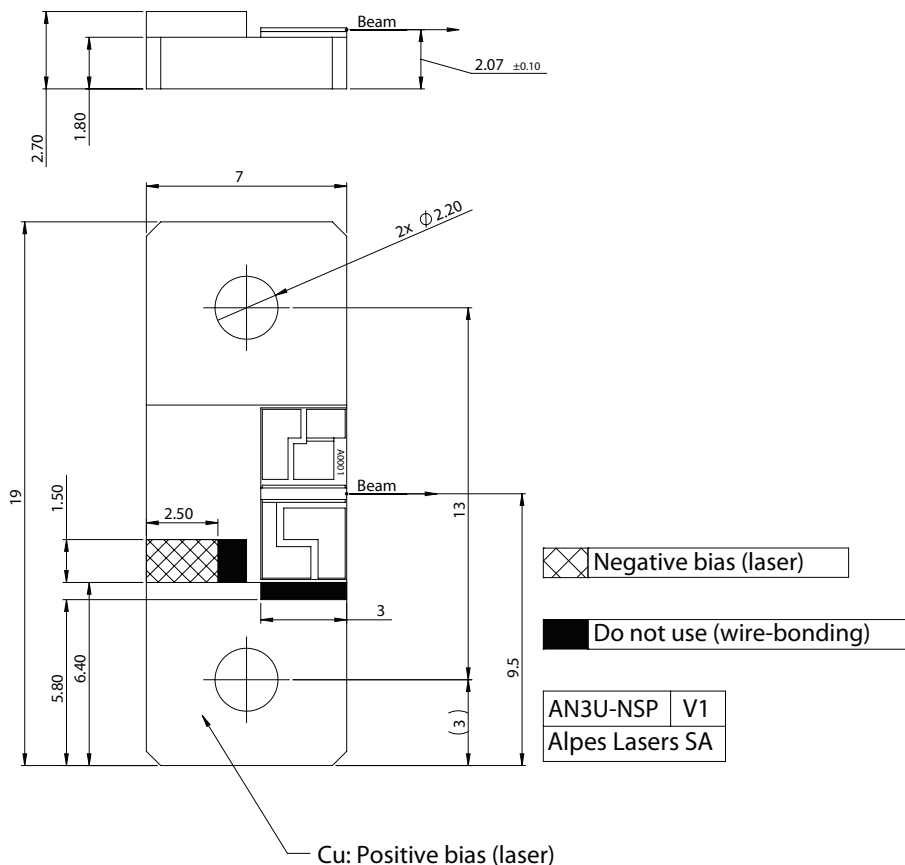


Figure 1: Mechanical and electrical interface for #sbcw9177 DN

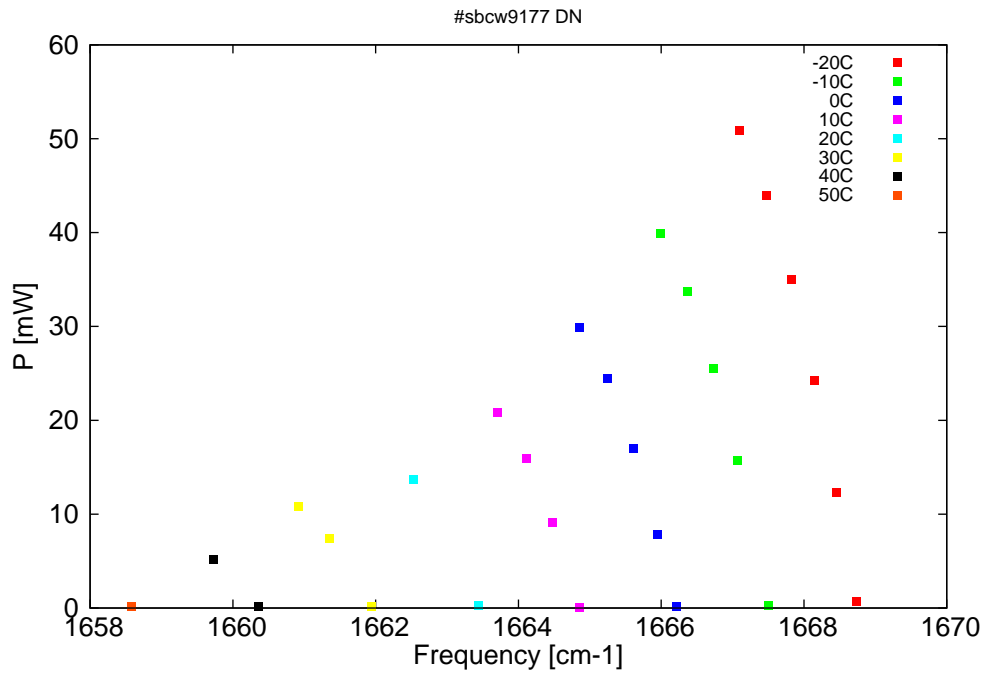


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

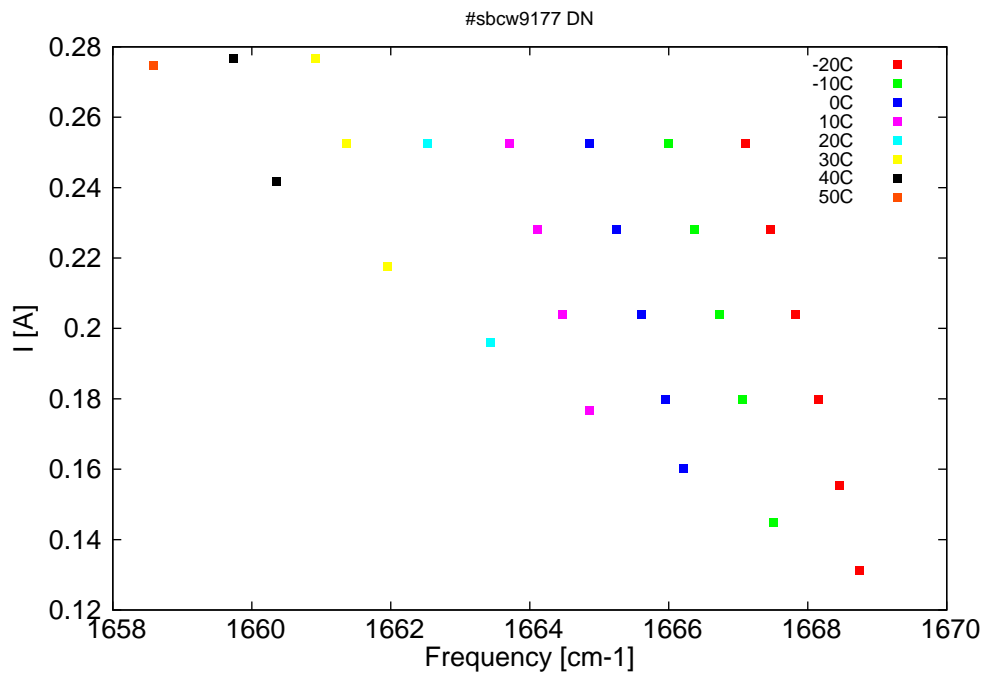


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5992.5	1668.7	0.7	-20	9.44	0.131
5993.6	1668.5	12.2	-20	9.72	0.156
5994.7	1668.2	24.3	-20	10	0.18
5995.8	1667.8	35	-20	10.26	0.204
5997.1	1667.5	43.9	-20	10.53	0.228
5998.4	1667.1	50.9	-20	10.79	0.253
5997	1667.5	0.3	-10	9.52	0.145
5998.6	1667.1	15.7	-10	9.92	0.18
5999.8	1666.7	25.5	-10	10.19	0.204
6001.1	1666.4	33.8	-10	10.45	0.228
6002.4	1666	39.9	-10	10.72	0.253
6001.6	1666.2	0.2	0	9.62	0.16
6002.6	1666	7.8	0	9.84	0.18
6003.8	1665.6	17	0	10.11	0.204
6005.1	1665.2	24.4	0	10.38	0.228
6006.5	1664.9	29.9	0	10.65	0.253
6006.5	1664.9	0.1	10	9.73	0.177
6007.9	1664.5	9.1	10	10.04	0.204
6009.2	1664.1	15.9	10	10.3	0.228
6010.7	1663.7	20.9	10	10.58	0.253
6011.6	1663.4	0.3	20	9.87	0.196
6014.9	1662.5	13.7	20	10.5	0.253
6017	1661.9	0.2	30	10.03	0.218
6019.2	1661.4	7.4	30	10.42	0.253
6020.8	1660.9	10.9	30	10.69	0.277
6022.8	1660.4	0.2	40	10.22	0.242
6025.1	1659.7	5.2	40	10.61	0.277
6029.3	1658.6	0.1	50	10.51	0.275

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

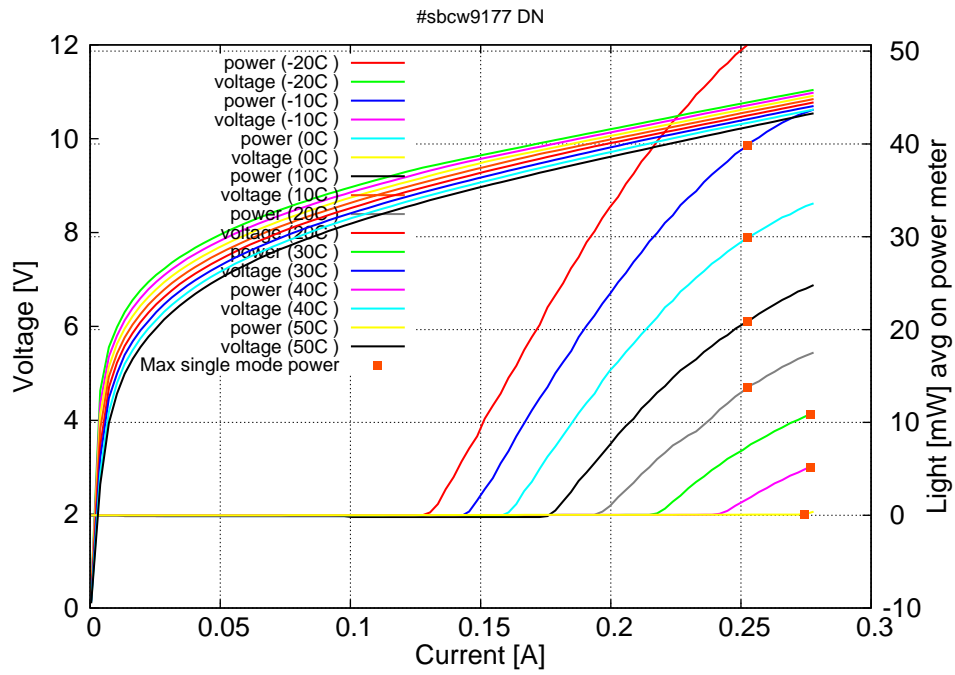


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=9.4V$ (2-wires measurements). Maximum operation current: 0.255A between -20C and 20C, 0.28A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

