

Datasheet for #sbcw19791 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.

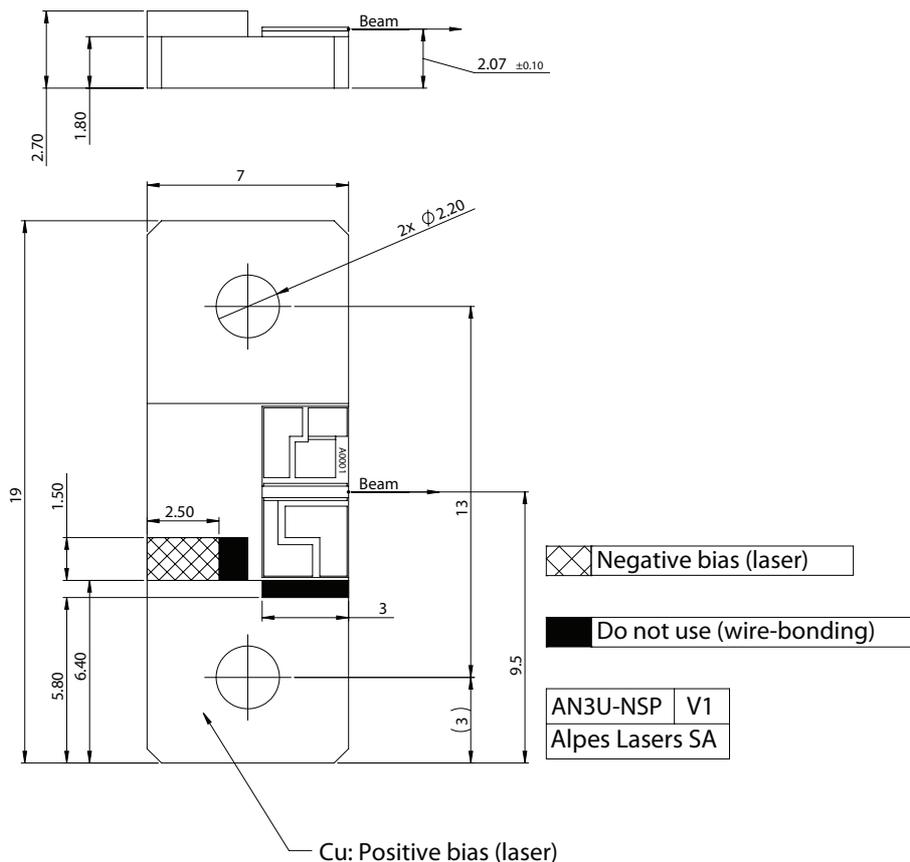


Figure 1: Mechanical and electrical interface for #sbcw19791 DN

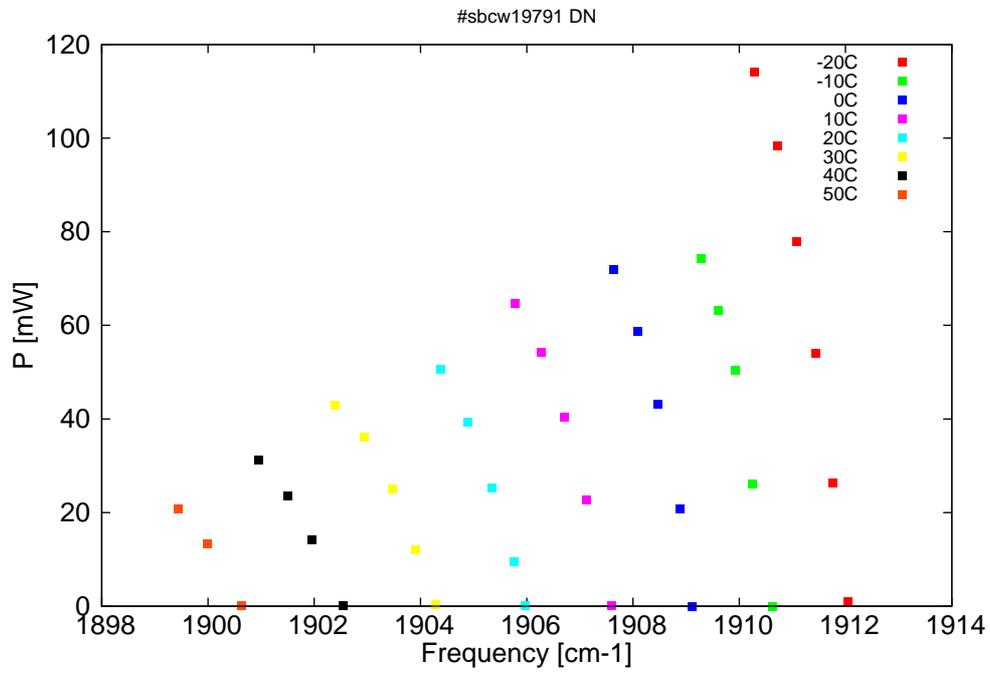


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

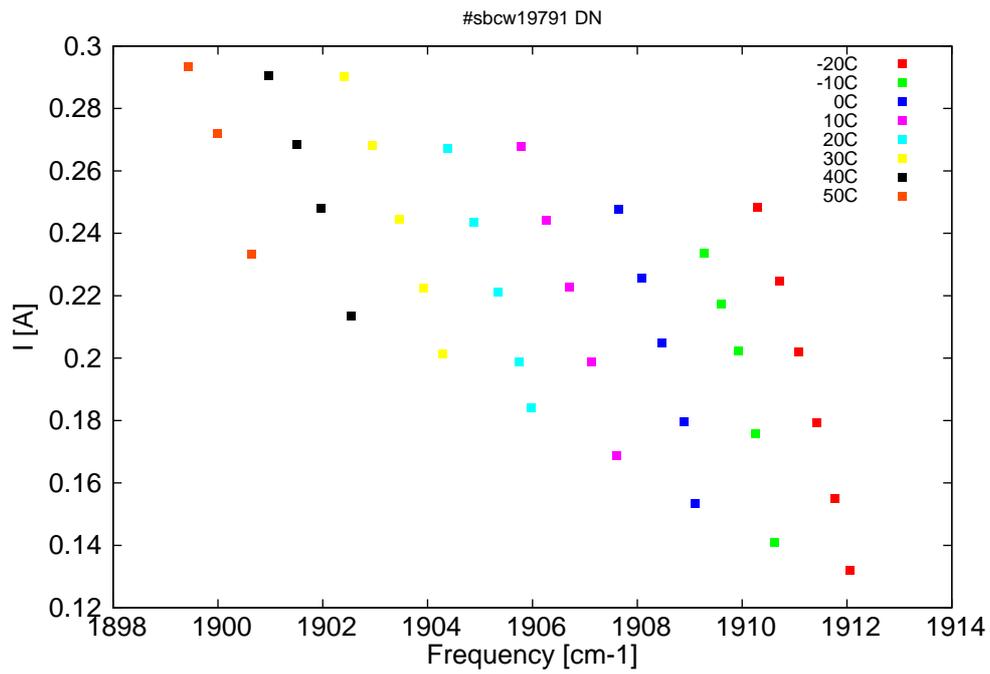


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5230	1912.1	0.9	-20	7.56	0.132
5230.8	1911.8	26.3	-20	7.71	0.155
5231.7	1911.4	54.1	-20	7.88	0.179
5232.6	1911.1	78	-20	8.03	0.202
5233.6	1910.7	98.3	-20	8.19	0.225
5234.8	1910.3	114.2	-20	8.36	0.248
5233.9	1910.6	0	-10	7.57	0.141
5234.9	1910.2	26	-10	7.77	0.176
5235.8	1909.9	50.4	-10	7.92	0.202
5236.7	1909.6	63.3	-10	8.06	0.217
5237.6	1909.3	74.3	-10	8.19	0.233
5238.1	1909.1	0	0	7.61	0.153
5238.7	1908.9	20.9	0	7.74	0.179
5239.8	1908.5	43.2	0	7.92	0.205
5240.8	1908.1	58.7	0	8.07	0.226
5242.1	1907.6	72	0	8.25	0.248
5242.2	1907.6	0	10	7.66	0.169
5243.5	1907.1	22.8	10	7.87	0.199
5244.6	1906.7	40.4	10	8.03	0.223
5245.8	1906.3	54.2	10	8.19	0.244
5247.2	1905.8	64.8	10	8.37	0.268
5246.7	1906	0.2	20	7.61	0.184
5247.3	1905.8	9.6	20	7.82	0.199
5248.4	1905.3	25.2	20	7.98	0.221
5249.7	1904.9	39.3	20	8.14	0.244
5251	1904.4	50.6	20	8.32	0.267
5251.3	1904.3	0.3	30	7.81	0.201
5252.3	1903.9	12.1	30	7.94	0.222
5253.6	1903.5	25.1	30	8.1	0.245
5255	1902.9	36	30	8.27	0.268
5256.5	1902.4	43	30	8.44	0.29
5256.1	1902.5	0.1	40	7.85	0.213
5257.7	1902	14.2	40	8.07	0.248
5259	1901.5	23.5	40	8.23	0.268
5260.5	1901	31.3	40	8.39	0.29
5261.4	1900.6	0.1	50	8	0.233
5263.2	1900	13.3	50	8.19	0.272
5264.7	1899.4	20.9	50	8.36	0.294

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

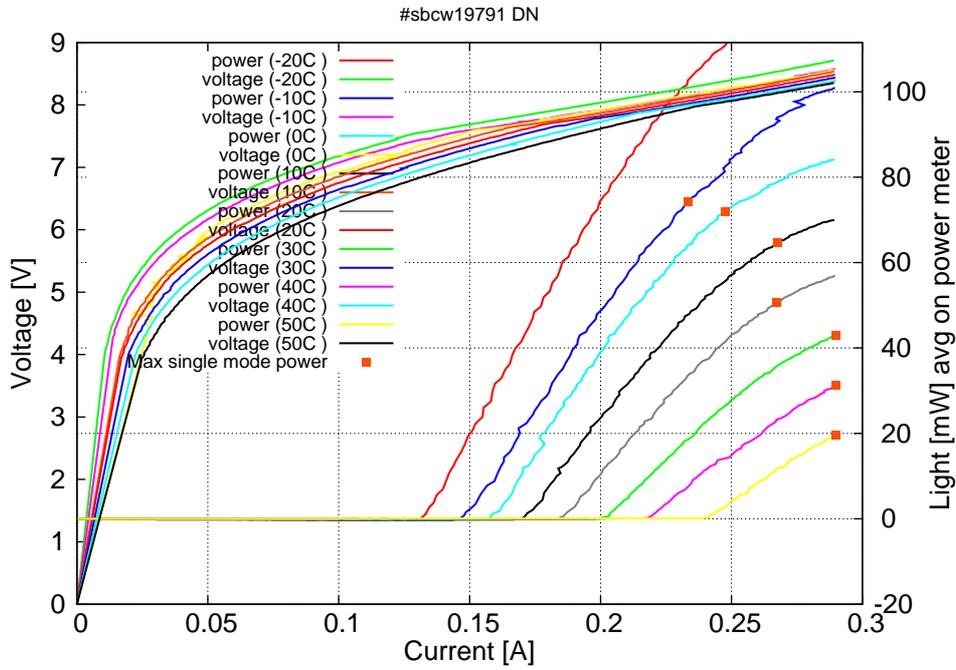


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.25A between -20C and 0C, 0.27A between 10C and 20C, 0.29A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

