

**Datasheet for #sbcw19790 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 #sbcw19790 DN

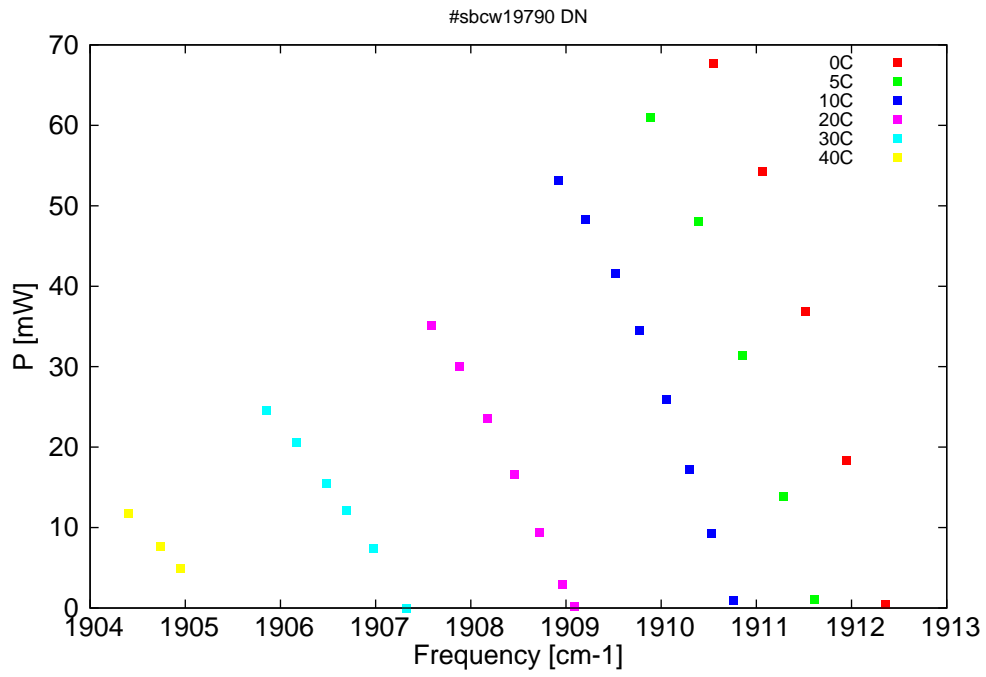


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

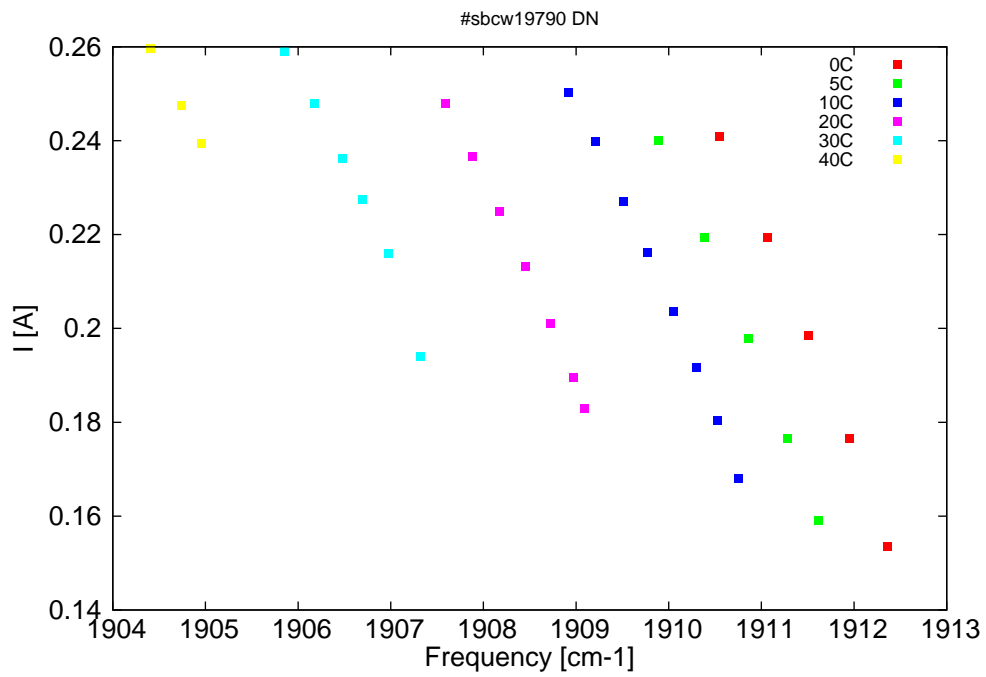


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5229.1	1912.4	0.4	0	8.14	0.154
5230.3	1912	18.4	0	8.36	0.177
5231.5	1911.5	36.9	0	8.58	0.198
5232.7	1911.1	54.3	0	8.8	0.219
5234.1	1910.6	67.7	0	9.03	0.241
5231.2	1911.6	1.1	5	8.17	0.159
5232.1	1911.3	13.8	5	8.33	0.177
5233.3	1910.9	31.4	5	8.54	0.198
5234.5	1910.4	48.1	5	8.76	0.219
5235.9	1909.9	60.9	5	8.99	0.24
5233.5	1910.8	0.9	10	8.21	0.168
5234.2	1910.5	9.3	10	8.32	0.18
5234.8	1910.3	17.2	10	8.42	0.192
5235.5	1910.1	25.9	10	8.53	0.204
5236.2	1909.8	34.5	10	8.66	0.216
5236.9	1909.5	41.6	10	8.77	0.227
5237.8	1909.2	48.4	10	8.91	0.24
5238.6	1908.9	53.1	10	9.03	0.25
5238.1	1909.1	0.2	20	8.3	0.183
5238.4	1909	2.9	20	8.35	0.19
5239.1	1908.7	9.4	20	8.45	0.201
5239.8	1908.5	16.6	20	8.57	0.213
5240.6	1908.2	23.6	20	8.69	0.225
5241.4	1907.9	30	20	8.81	0.237
5242.2	1907.6	35.1	20	8.93	0.248
5243	1907.3	0	30	8.42	0.194
5243.9	1907	7.4	30	8.55	0.216
5244.7	1906.7	12.1	30	8.66	0.228
5245.3	1906.5	15.5	30	8.74	0.236
5246.1	1906.2	20.6	30	8.86	0.248
5247	1905.9	24.6	30	8.98	0.259
5249.5	1905	4.9	40	8.72	0.239
5250.1	1904.7	7.7	40	8.8	0.247
5251	1904.4	11.8	40	8.93	0.26

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

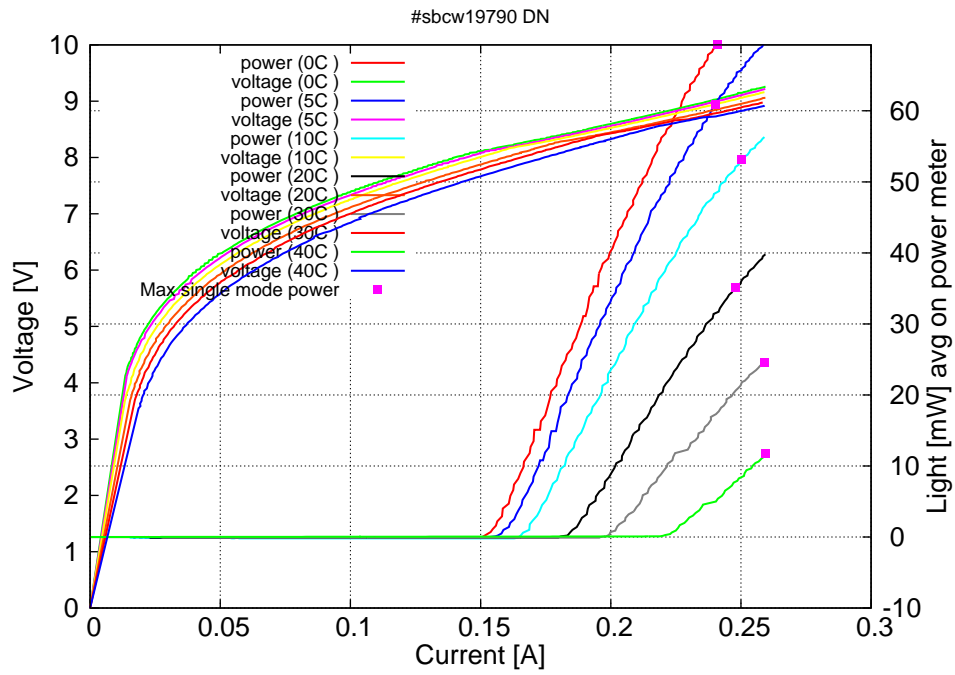


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C:  $I_{th}=0.15A$  /  $V_{th}=8.1V$  (2-wires measurements). Maximum operation current: 0.24A between 0C and 5C, 0.25A between 10C and 20C, 0.26A between 30C and 40C.

Figure 3: spectra at different temperatures for various DC currents

