

**Datasheet for #sbcw19591 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 #sbcw19591 DN

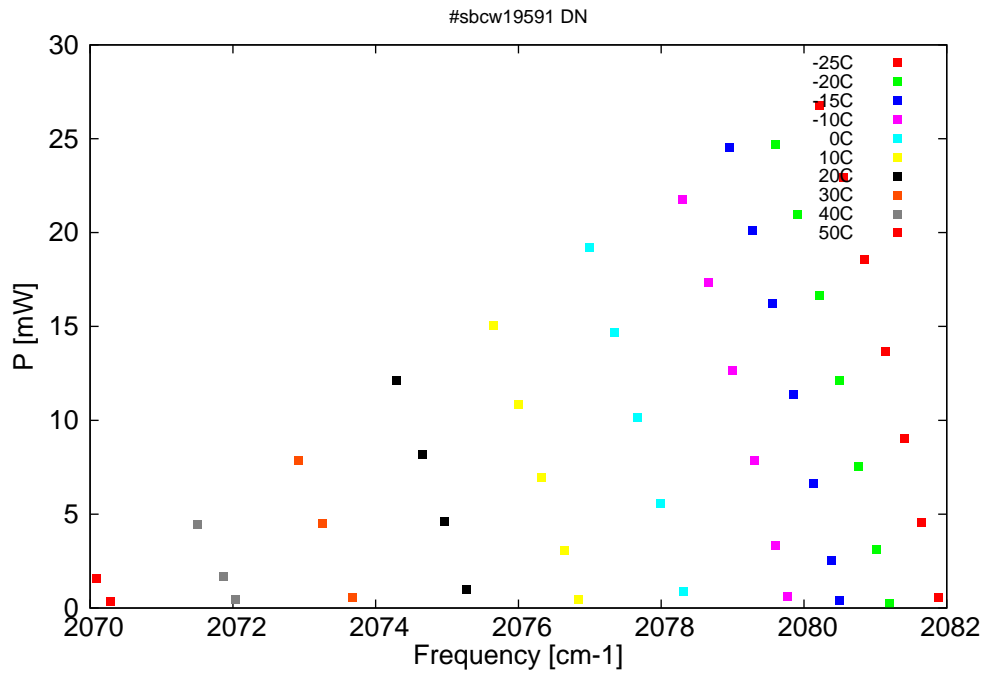


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

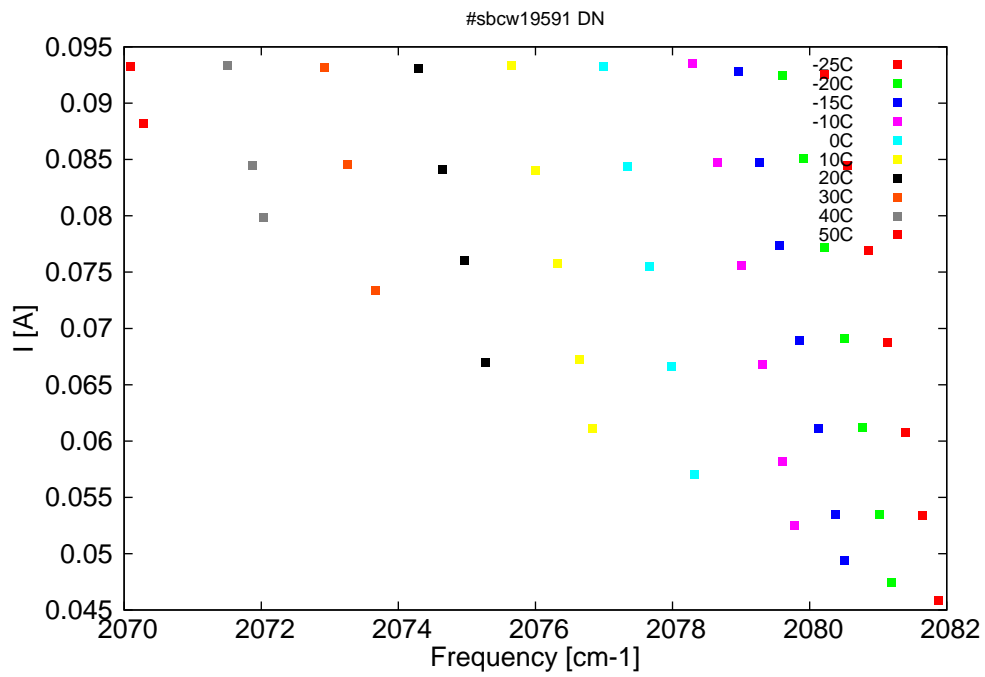


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4803.3	2081.9	0.6	-25	12.1	0.046
4803.9	2081.6	4.5	-25	12.42	0.053
4804.5	2081.4	9	-25	12.72	0.061
4805.1	2081.1	13.7	-25	13.05	0.069
4805.7	2080.9	18.6	-25	13.39	0.077
4806.4	2080.6	22.9	-25	13.73	0.084
4807.2	2080.2	26.8	-25	14.11	0.093
4804.9	2081.2	0.2	-20	12.1	0.047
4805.3	2081	3.1	-20	12.32	0.053
4805.9	2080.8	7.6	-20	12.64	0.061
4806.5	2080.5	12.1	-20	12.95	0.069
4807.2	2080.2	16.7	-20	13.28	0.077
4807.9	2079.9	21	-20	13.61	0.085
4808.6	2079.6	24.7	-20	13.95	0.092
4806.5	2080.5	0.4	-15	12.09	0.049
4806.8	2080.4	2.5	-15	12.24	0.053
4807.4	2080.1	6.6	-15	12.54	0.061
4808	2079.9	11.4	-15	12.85	0.069
4808.7	2079.6	16.2	-15	13.18	0.077
4809.4	2079.3	20.1	-15	13.49	0.085
4810.1	2079	24.5	-15	13.83	0.093
4808.2	2079.8	0.6	-10	12.09	0.053
4808.6	2079.6	3.3	-10	12.29	0.058
4809.3	2079.3	7.9	-10	12.62	0.067
4810	2079	12.6	-10	12.95	0.076
4810.8	2078.7	17.3	-10	13.3	0.085
4811.6	2078.3	21.8	-10	13.67	0.094
4811.6	2078.3	0.9	0	12.12	0.057
4812.3	2078	5.6	0	12.46	0.067
4813.1	2077.7	10.1	0	12.78	0.075
4813.8	2077.3	14.7	0	13.1	0.084
4814.7	2077	19.2	0	13.44	0.093
4815	2076.8	0.4	10	12.14	0.061
4815.5	2076.6	3	10	12.33	0.067
4816.2	2076.3	6.9	10	12.63	0.076
4817	2076	10.9	10	12.92	0.084
4817.8	2075.6	15.1	10	13.24	0.093
4818.6	2075.3	1	20	12.22	0.067
4819.4	2075	4.6	20	12.49	0.076
4820.1	2074.7	8.2	20	12.76	0.084
4820.9	2074.3	12.1	20	13.05	0.093
4822.4	2073.7	0.6	30	12.31	0.073
4823.3	2073.3	4.5	30	12.63	0.085
4824.1	2072.9	7.8	30	12.91	0.093
4826.2	2072	0.4	40	12.41	0.08
4826.6	2071.9	1.7	40	12.52	0.084
4827.4	2071.5	4.5	40	12.78	0.093
4830.3	2070.3	0.4	50	12.56	0.088
4830.7	2070.1	1.6	50	12.68	0.093

*continued on next page*

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

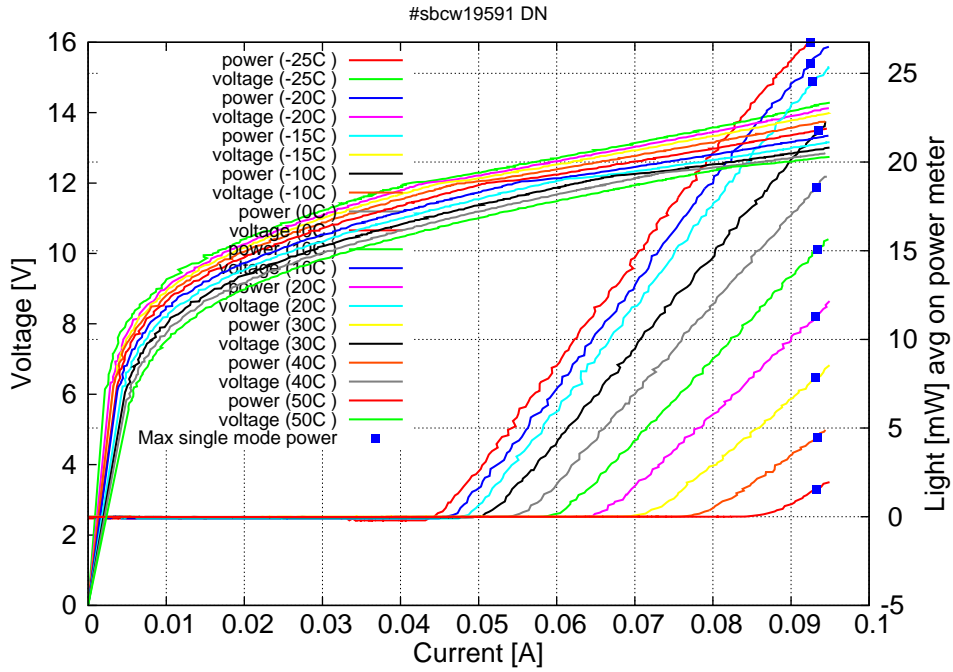


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -25C:  $I_{th}=0.04\text{A}$  /  $V_{th}=12.1\text{V}$  (2-wires measurements). Maximum operation current: 0.095A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

