

Datasheet for #sbcw19759 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 bias and positive bias on the specific zones drawn below. 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 #sbcw19759 DN (please note that AlN submount numbering is A0N99)

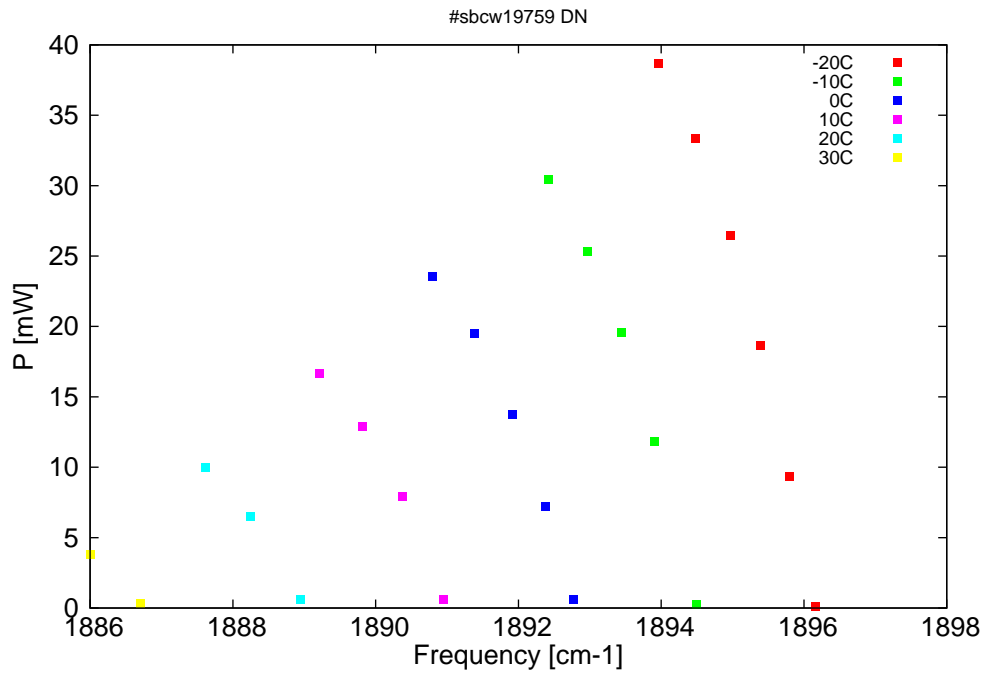


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

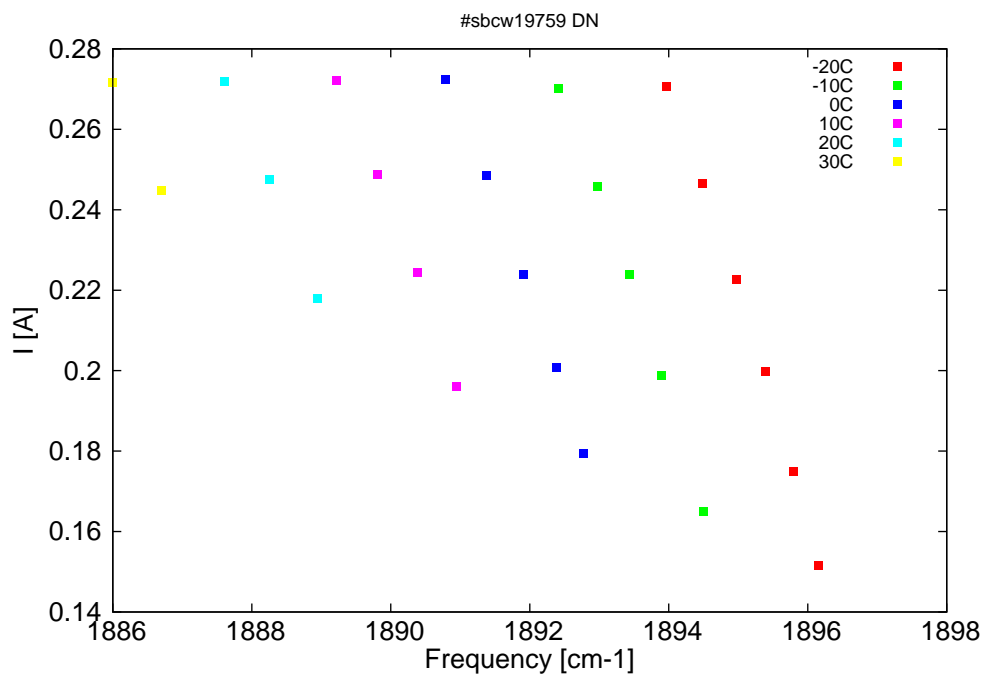


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5273.8	1896.2	0.1	-20	7.92	0.151
5274.8	1895.8	9.3	-20	8.09	0.175
5276	1895.4	18.7	-20	8.28	0.2
5277.1	1895	26.5	-20	8.46	0.223
5278.5	1894.5	33.3	-20	8.66	0.247
5279.9	1894	38.7	-20	8.88	0.271
5278.4	1894.5	0.3	-10	7.97	0.165
5280.1	1893.9	11.8	-10	8.24	0.199
5281.4	1893.4	19.6	-10	8.44	0.224
5282.7	1893	25.3	-10	8.63	0.246
5284.3	1892.4	30.5	-10	8.85	0.27
5283.3	1892.8	0.6	0	8.04	0.179
5284.3	1892.4	7.2	0	8.21	0.201
5285.7	1891.9	13.8	0	8.39	0.224
5287.1	1891.4	19.5	0	8.6	0.249
5288.8	1890.8	23.5	0	8.83	0.272
5288.3	1891	0.6	10	8.13	0.196
5289.9	1890.4	7.9	10	8.36	0.224
5291.5	1889.8	12.9	10	8.57	0.249
5293.2	1889.2	16.7	10	8.78	0.272
5293.9	1889	0.6	20	8.27	0.218
5295.9	1888.3	6.5	20	8.52	0.248
5297.7	1887.6	10	20	8.75	0.272
5300.3	1886.7	0.3	30	8.46	0.245
5302.2	1886	3.8	30	8.7	0.272

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

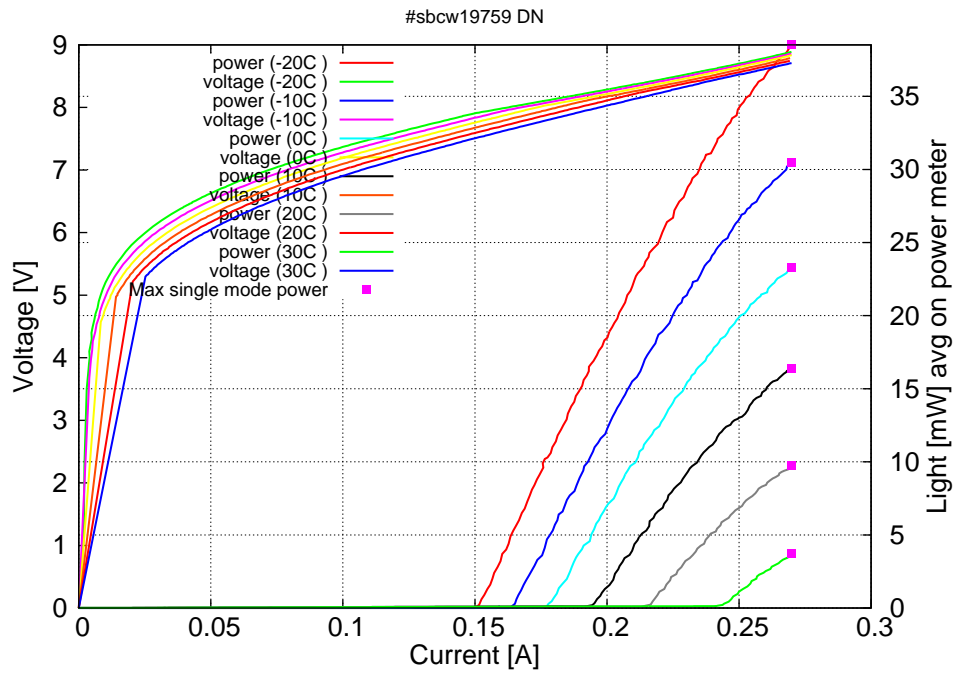


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=7.9V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

