

Datasheet for #sbcw19769 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 #sbcw19769 DN (please note that AlN submount numbering is A0PE6)

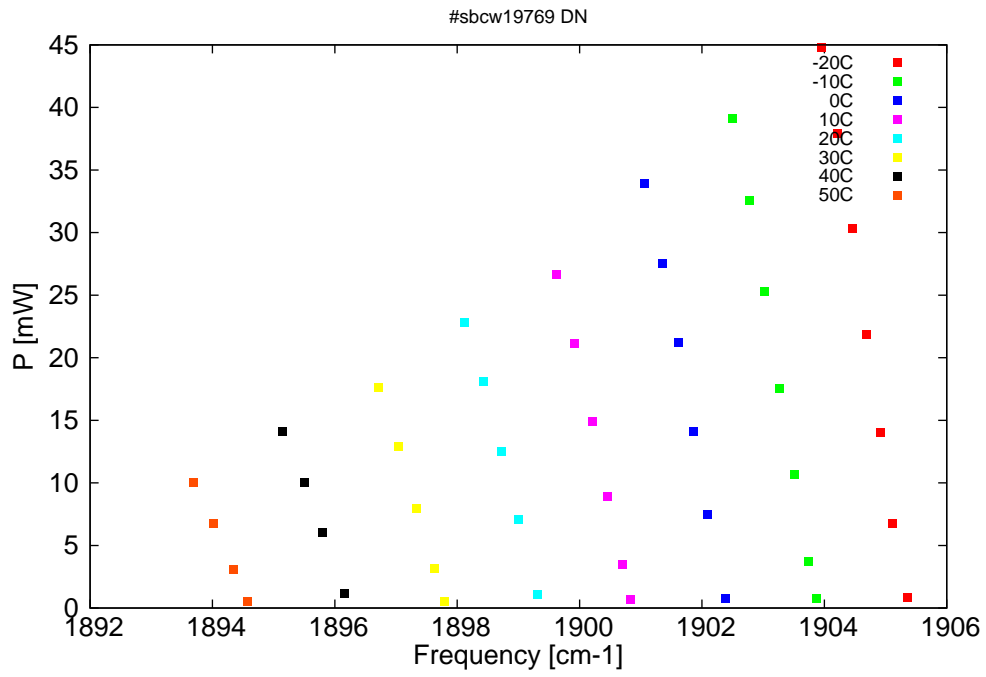


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

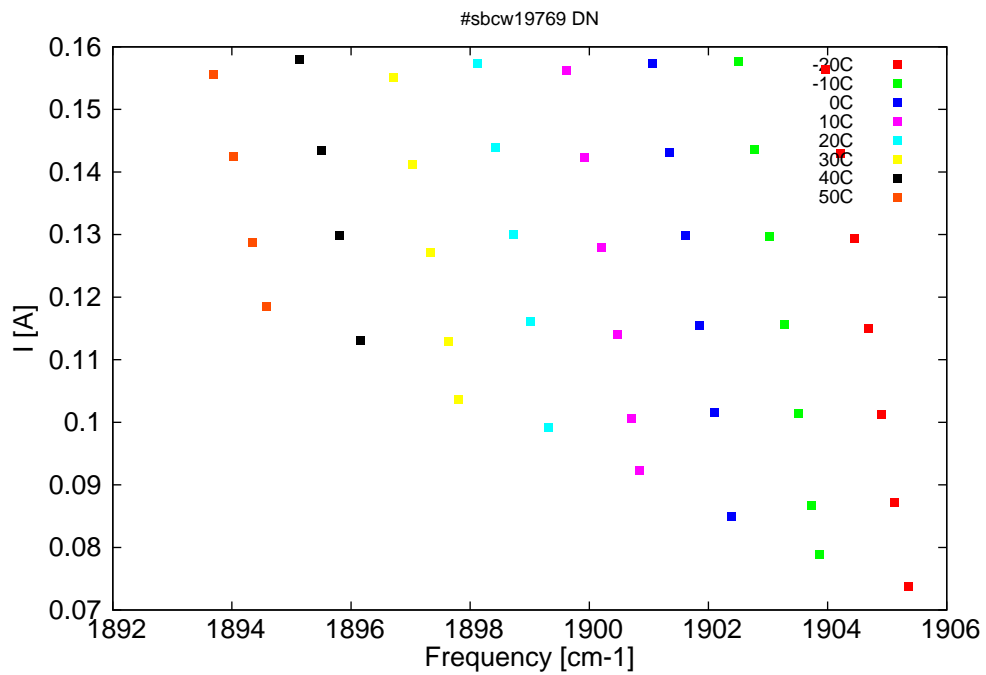


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5248.4	1905.4	0.8	-20	7.46	0.074
5249	1905.1	6.8	-20	7.64	0.087
5249.6	1904.9	14.1	-20	7.82	0.101
5250.2	1904.7	21.9	-20	8	0.115
5250.8	1904.5	30.3	-20	8.19	0.129
5251.5	1904.2	37.9	-20	8.37	0.143
5252.2	1904	44.8	-20	8.58	0.156
5252.5	1903.9	0.7	-10	7.48	0.079
5252.8	1903.7	3.7	-10	7.59	0.087
5253.5	1903.5	10.7	-10	7.78	0.101
5254.1	1903.3	17.5	-10	7.97	0.116
5254.8	1903	25.3	-10	8.15	0.13
5255.5	1902.8	32.6	-10	8.35	0.144
5256.2	1902.5	39.2	-10	8.57	0.158
5256.6	1902.4	0.8	0	7.53	0.085
5257.4	1902.1	7.4	0	7.75	0.102
5258	1901.9	14.1	0	7.93	0.116
5258.7	1901.6	21.2	0	8.13	0.13
5259.4	1901.3	27.6	0	8.33	0.143
5260.2	1901.1	34	0	8.55	0.157
5260.8	1900.8	0.7	10	7.6	0.092
5261.2	1900.7	3.5	10	7.71	0.101
5261.9	1900.5	8.9	10	7.89	0.114
5262.6	1900.2	14.9	10	8.09	0.128
5263.4	1899.9	21.1	10	8.29	0.142
5264.2	1899.6	26.7	10	8.51	0.156
5265.1	1899.3	1.1	20	7.66	0.099
5265.9	1899	7.1	20	7.89	0.116
5266.7	1898.7	12.5	20	8.09	0.13
5267.5	1898.4	18.1	20	8.29	0.144
5268.4	1898.1	22.8	20	8.51	0.157
5269.3	1897.8	0.5	30	7.7	0.104
5269.7	1897.6	3.2	30	7.82	0.113
5270.6	1897.3	8	30	8.03	0.127
5271.4	1897	13	30	8.23	0.141
5272.3	1896.7	17.7	30	8.45	0.155
5273.8	1896.2	1.1	40	7.8	0.113
5274.8	1895.8	6	40	8.04	0.13
5275.7	1895.5	10	40	8.24	0.143
5276.7	1895.1	14.1	40	8.48	0.158
5278.2	1894.6	0.5	50	7.85	0.119
5278.9	1894.3	3.1	50	8	0.129
5279.8	1894	6.8	50	8.22	0.143
5280.7	1893.7	10	50	8.43	0.156

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

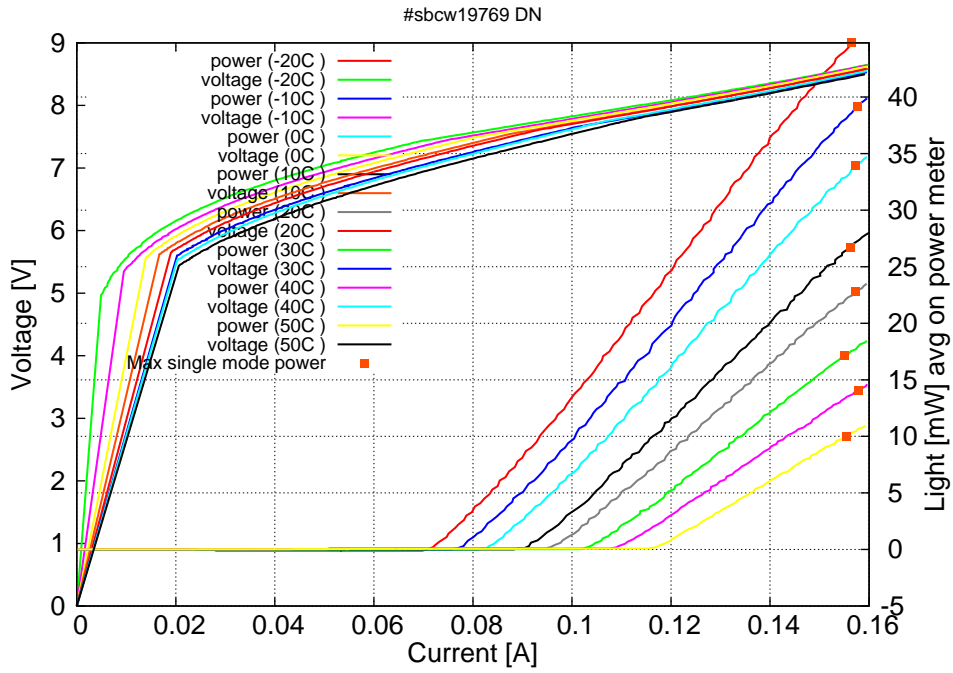


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.45V$ (2-wires measurements). Maximum operation current: 0.160A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

