

Datasheet for #sbcw19795 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 #sbcw19795 DN (please note that AlN submount numbering is A0PLA)

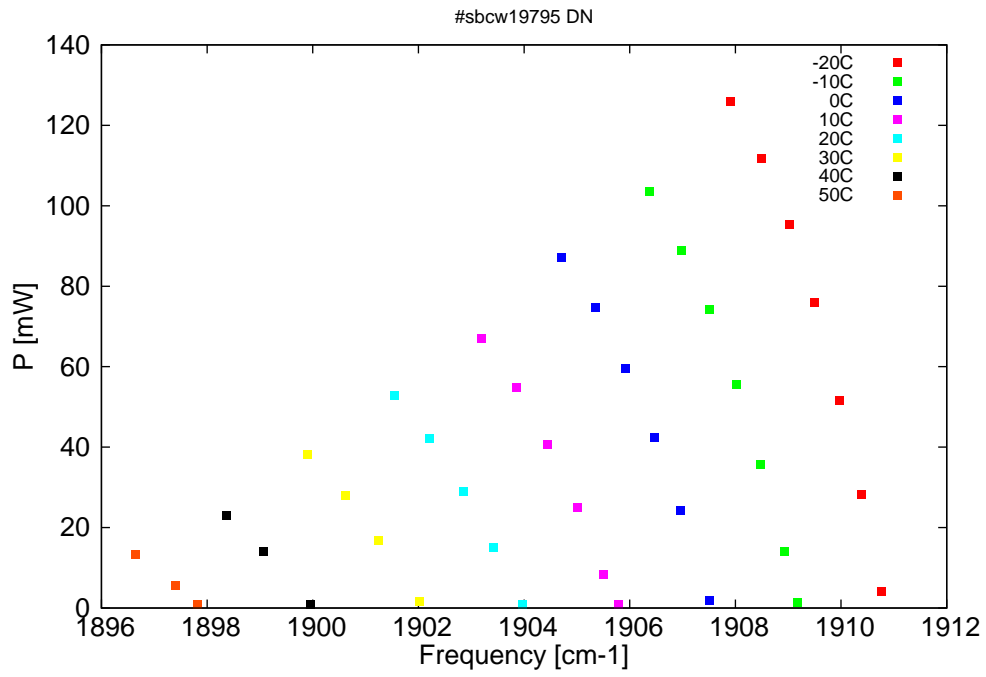


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

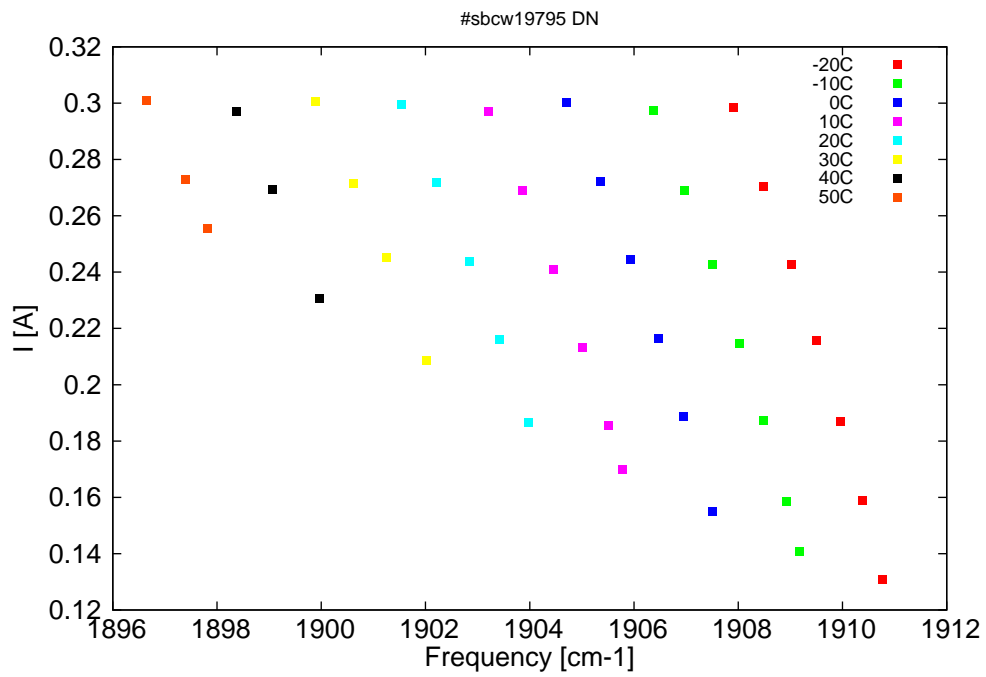


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5233.5	1910.8	4	-20	7.46	0.131
5234.5	1910.4	28.2	-20	7.66	0.159
5235.7	1910	51.6	-20	7.85	0.187
5237	1909.5	75.8	-20	8.05	0.216
5238.3	1909	95.3	-20	8.25	0.243
5239.7	1908.5	111.8	-20	8.44	0.27
5241.3	1907.9	125.9	-20	8.65	0.298
5237.9	1909.2	1.4	-10	7.47	0.141
5238.6	1908.9	13.9	-10	7.6	0.159
5239.8	1908.5	35.7	-10	7.8	0.187
5241	1908	55.5	-10	7.99	0.215
5242.5	1907.5	74.2	-10	8.19	0.243
5243.9	1907	88.8	-10	8.38	0.269
5245.6	1906.4	103.5	-10	8.59	0.298
5242.4	1907.5	1.9	0	7.52	0.155
5244	1907	24.2	0	7.75	0.189
5245.3	1906.5	42.5	0	7.95	0.217
5246.8	1905.9	59.5	0	8.15	0.244
5248.4	1905.4	74.7	0	8.35	0.272
5250.1	1904.7	87.1	0	8.56	0.3
5247.2	1905.8	0.8	10	7.58	0.17
5247.9	1905.5	8.4	10	7.68	0.186
5249.3	1905	25	10	7.88	0.213
5250.9	1904.5	40.6	10	8.08	0.241
5252.5	1903.9	54.9	10	8.28	0.269
5254.3	1903.2	66.9	10	8.48	0.297
5252.2	1904	0.9	20	7.62	0.187
5253.7	1903.4	15.1	20	7.82	0.216
5255.3	1902.8	29	20	8.01	0.244
5257	1902.2	42.2	20	8.21	0.272
5258.9	1901.5	52.8	20	8.41	0.3
5257.6	1902	1.6	30	7.7	0.209
5259.7	1901.2	16.8	30	7.93	0.245
5261.4	1900.6	27.9	30	8.12	0.271
5263.5	1899.9	38.2	30	8.33	0.301
5263.3	1900	0.9	40	7.81	0.231
5265.7	1899.1	14.1	40	8.07	0.269
5267.7	1898.4	23	40	8.26	0.297
5269.2	1897.8	1	50	7.92	0.255
5270.4	1897.4	5.6	50	8.03	0.273
5272.5	1896.6	13.4	50	8.22	0.301

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

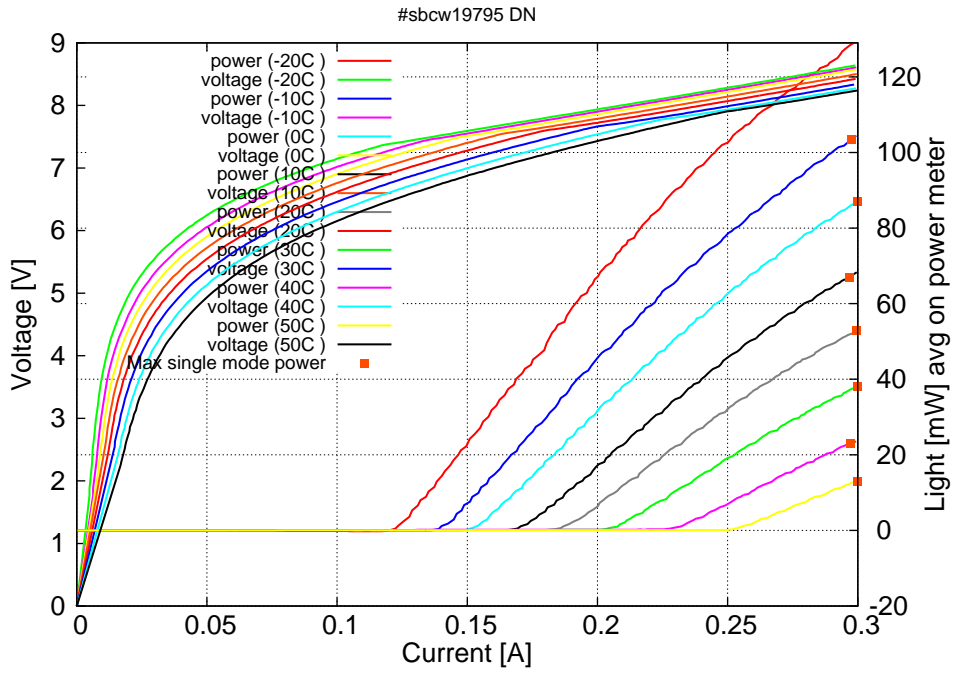


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=7.4V$ (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

