

Datasheet for #sbcw26820 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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.

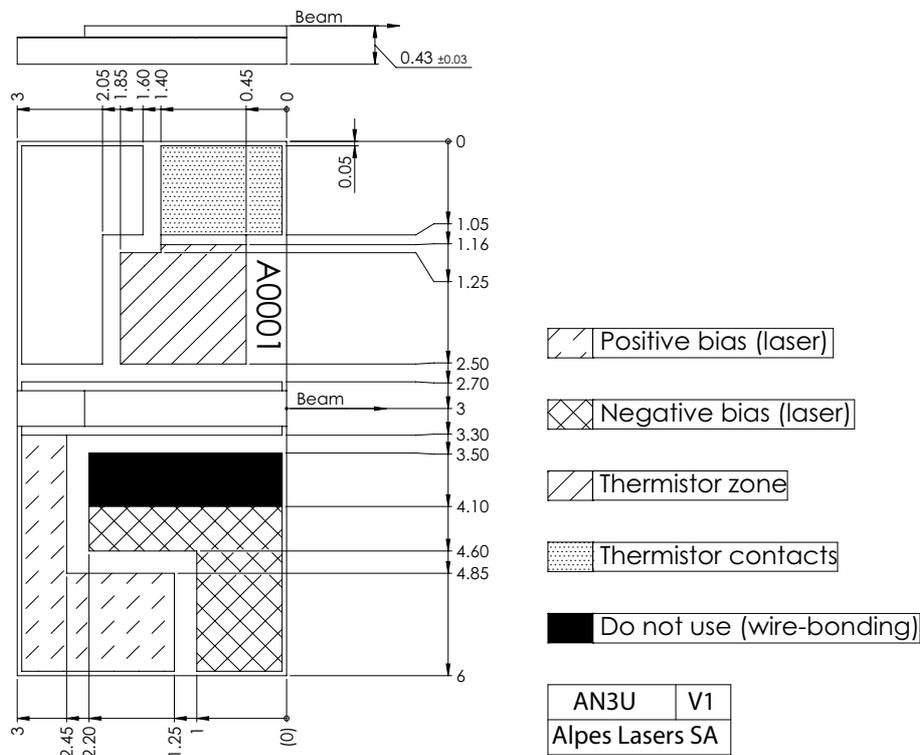


Figure 1: Mechanical and electrical interface for #sbcw26820 DN (please note that AlN submount numbering is A0WGZ)

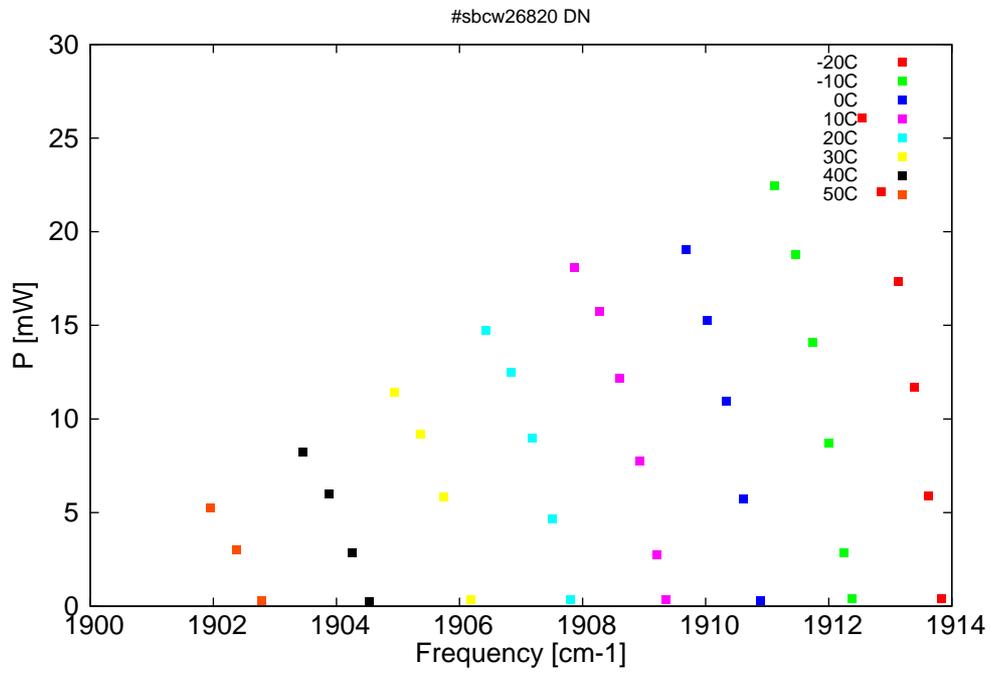


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

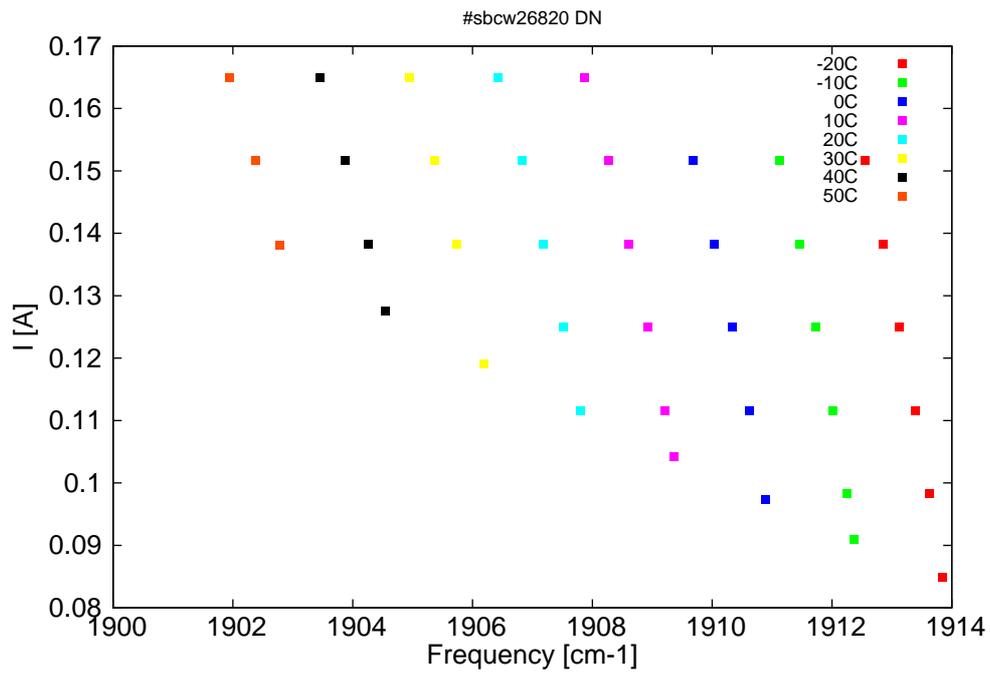


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5225.1	1913.8	0.4	-20	7.71	0.085
5225.7	1913.6	5.9	-20	7.88	0.098
5226.3	1913.4	11.7	-20	8.06	0.112
5227	1913.1	17.3	-20	8.26	0.125
5227.8	1912.9	22.2	-20	8.46	0.138
5228.6	1912.5	26.1	-20	8.69	0.152
5229.1	1912.4	0.4	-10	7.76	0.091
5229.4	1912.3	2.9	-10	7.86	0.098
5230.1	1912	8.7	-10	8.04	0.112
5230.8	1911.7	14.1	-10	8.24	0.125
5231.6	1911.5	18.8	-10	8.45	0.138
5232.5	1911.1	22.5	-10	8.68	0.152
5233.2	1910.9	0.3	0	7.82	0.097
5233.9	1910.6	5.7	0	8.03	0.112
5234.7	1910.3	11	0	8.22	0.125
5235.5	1910	15.3	0	8.44	0.138
5236.5	1909.7	19.1	0	8.67	0.152
5237.4	1909.4	0.4	10	7.9	0.104
5237.8	1909.2	2.7	10	8.01	0.112
5238.5	1908.9	7.7	10	8.21	0.125
5239.4	1908.6	12.2	10	8.42	0.138
5240.4	1908.3	15.7	10	8.66	0.152
5241.4	1907.9	18.1	10	8.92	0.165
5241.6	1907.8	0.4	20	7.99	0.112
5242.4	1907.5	4.6	20	8.19	0.125
5243.3	1907.2	9	20	8.41	0.138
5244.3	1906.8	12.5	20	8.65	0.152
5245.4	1906.4	14.7	20	8.9	0.165
5246.1	1906.2	0.4	30	8.09	0.119
5247.3	1905.7	5.8	30	8.4	0.138
5248.3	1905.4	9.2	30	8.63	0.152
5249.5	1904.9	11.4	30	8.89	0.165
5250.6	1904.5	0.2	40	8.21	0.128
5251.4	1904.3	2.8	40	8.38	0.138
5252.4	1903.9	6	40	8.62	0.152
5253.6	1903.5	8.2	40	8.87	0.165
5255.5	1902.8	0.3	50	8.37	0.138
5256.6	1902.4	3	50	8.6	0.152
5257.8	1902	5.2	50	8.85	0.165

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

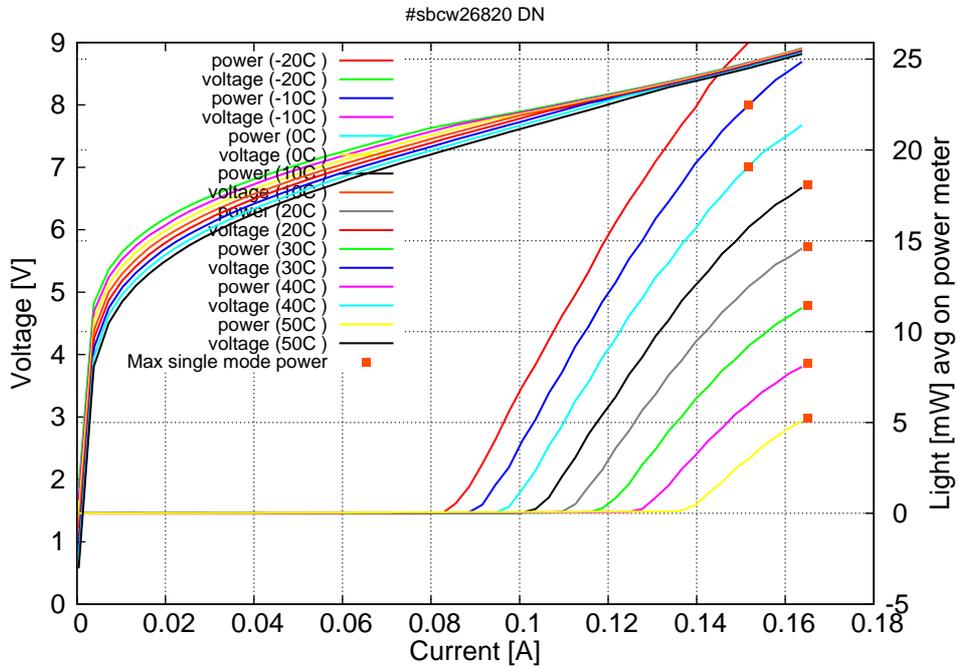


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.7V$ (2-wires measurements). Maximum operation current: 0.155A between -20C and 0C, 0.165A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

