

Datasheet for #sbcw26504 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.

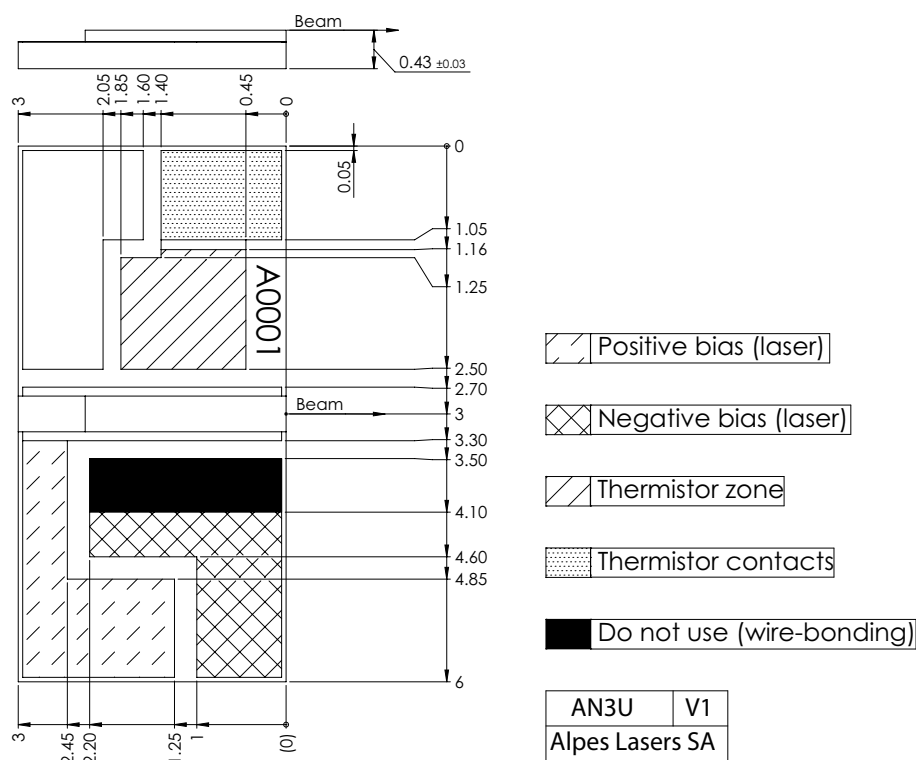


Figure 1: Mechanical and electrical interface for #sbcw26504 DN (please note that AlN submount numbering is A0V8K)

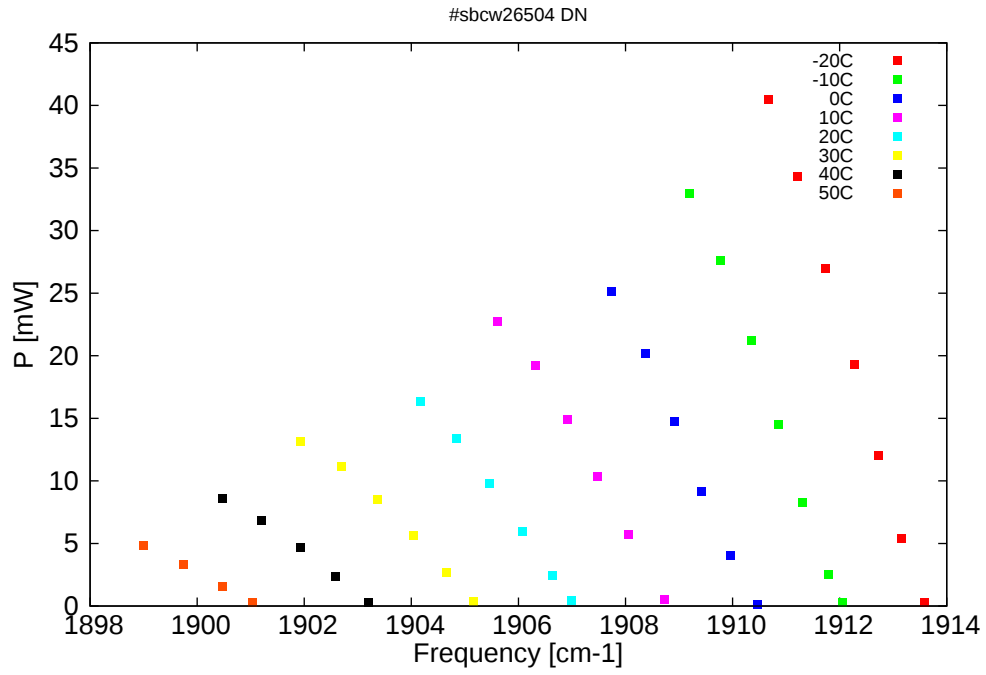


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

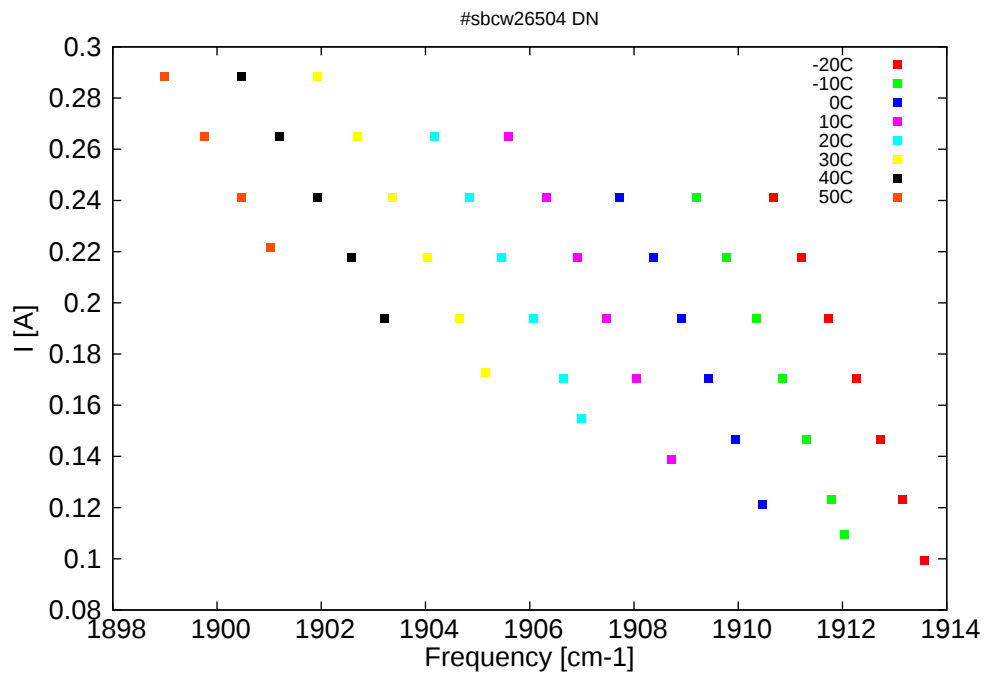


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5225.8	1913.6	0.3	-20	7.77	0.1
5227	1913.2	5.4	-20	8.04	0.123
5228.1	1912.7	12.1	-20	8.3	0.147
5229.4	1912.3	19.3	-20	8.56	0.17
5230.8	1911.7	27	-20	8.81	0.194
5232.3	1911.2	34.3	-20	9.06	0.218
5233.8	1910.7	40.5	-20	9.32	0.241
5230	1912	0.2	-10	7.81	0.109
5230.7	1911.8	2.5	-10	7.96	0.123
5232	1911.3	8.2	-10	8.22	0.147
5233.3	1910.9	14.5	-10	8.48	0.17
5234.6	1910.4	21.2	-10	8.73	0.194
5236.2	1909.8	27.6	-10	8.98	0.218
5237.8	1909.2	33	-10	9.25	0.241
5234.3	1910.5	0.1	0	7.87	0.121
5235.7	1910	4.1	0	8.14	0.147
5237.2	1909.4	9.1	0	8.4	0.17
5238.6	1908.9	14.7	0	8.65	0.194
5240.1	1908.4	20.2	0	8.9	0.218
5241.8	1907.7	25.1	0	9.16	0.241
5239.1	1908.7	0.6	10	7.99	0.139
5240.9	1908.1	5.7	10	8.32	0.17
5242.5	1907.5	10.3	10	8.58	0.194
5244.1	1906.9	14.9	10	8.82	0.218
5245.7	1906.3	19.2	10	9.08	0.241
5247.7	1905.6	22.7	10	9.34	0.265
5243.9	1907	0.4	20	8.12	0.155
5244.8	1906.6	2.4	20	8.28	0.17
5246.4	1906.1	5.9	20	8.52	0.194
5248.1	1905.5	9.8	20	8.78	0.218
5249.8	1904.8	13.4	20	9.02	0.241
5251.6	1904.2	16.4	20	9.28	0.265
5248.9	1905.2	0.4	30	8.2	0.173
5250.3	1904.7	2.6	30	8.41	0.194
5252	1904	5.6	30	8.66	0.218
5253.9	1903.4	8.5	30	8.91	0.241
5255.7	1902.7	11.1	30	9.16	0.265
5257.8	1901.9	13.1	30	9.42	0.289
5254.3	1903.2	0.3	40	8.33	0.194
5256	1902.6	2.4	40	8.57	0.218
5257.8	1901.9	4.7	40	8.81	0.241
5259.8	1901.2	6.8	40	9.06	0.265
5261.9	1900.5	8.6	40	9.32	0.289
5260.3	1901	0.3	50	8.52	0.222
5261.9	1900.5	1.6	50	8.72	0.241
5263.8	1899.8	3.3	50	8.96	0.265
5265.9	1899	4.8	50	9.21	0.289

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

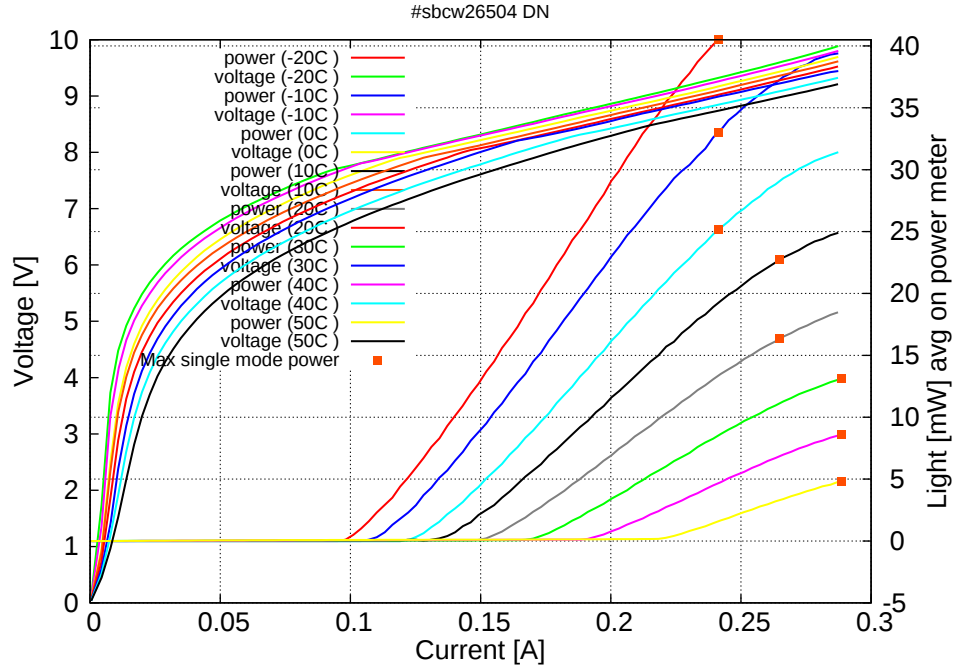


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=7.7V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and 0C, 0.265A between 10C and 20C, 0.29A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

