

Datasheet for #sbcw26574 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 #sbcw26574 DN (please note that AlN submount numbering is A0U6J)

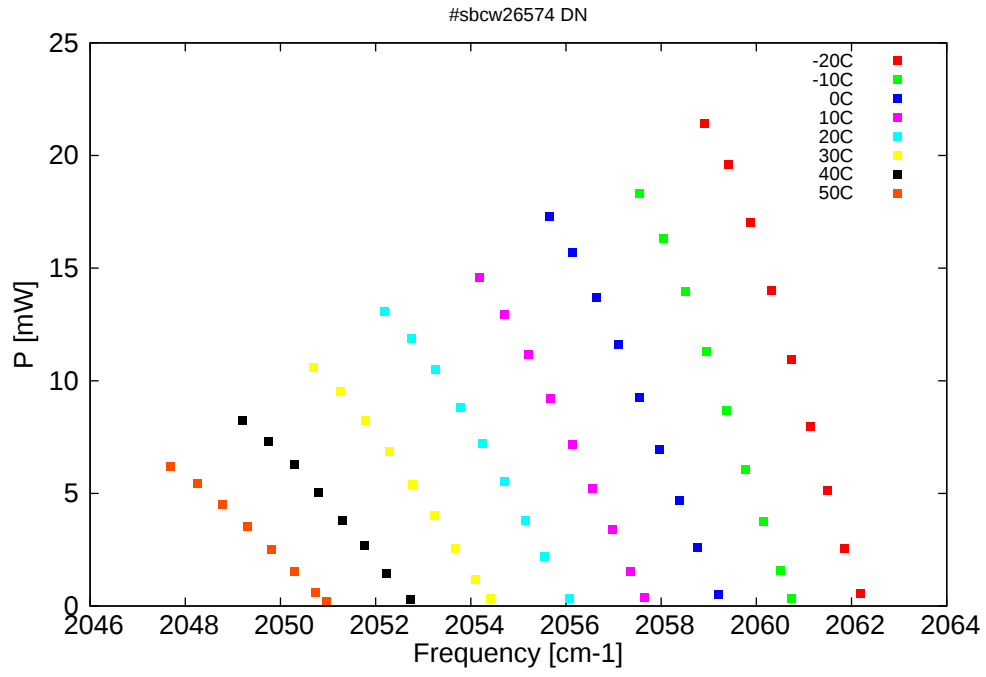


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

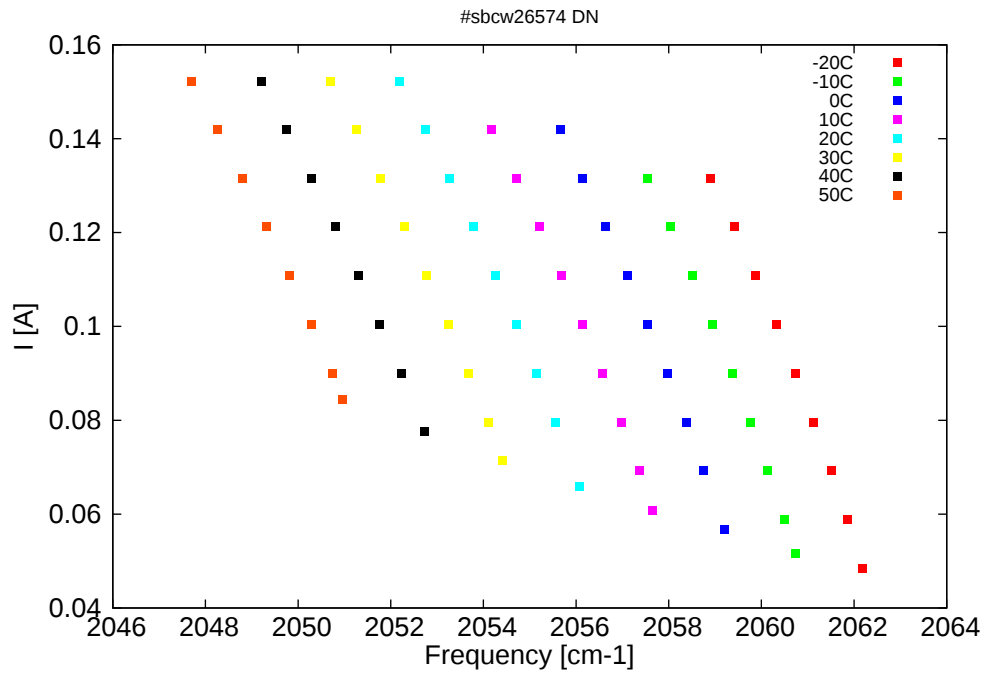


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4849.2	2062.2	0.5	-20	11.58	0.049
4850	2061.9	2.6	-20	11.93	0.059
4850.8	2061.5	5.1	-20	12.26	0.069
4851.7	2061.1	8	-20	12.59	0.08
4852.6	2060.7	10.9	-20	12.9	0.09
4853.6	2060.3	14	-20	13.22	0.1
4854.6	2059.9	17	-20	13.56	0.111
4855.8	2059.4	19.6	-20	13.92	0.121
4857	2058.9	21.4	-20	14.33	0.132
4852.6	2060.7	0.3	-10	11.54	0.052
4853.2	2060.5	1.6	-10	11.77	0.059
4854	2060.1	3.7	-10	12.09	0.069
4854.9	2059.8	6.1	-10	12.41	0.08
4855.8	2059.4	8.7	-10	12.71	0.09
4856.8	2059	11.3	-10	13.01	0.1
4857.9	2058.5	14	-10	13.33	0.111
4859	2058	16.3	-10	13.66	0.121
4860.2	2057.5	18.3	-10	14.02	0.132
4856.3	2059.2	0.5	0	11.56	0.057
4857.3	2058.8	2.6	0	11.94	0.069
4858.2	2058.4	4.7	0	12.24	0.08
4859.2	2058	7	0	12.54	0.09
4860.2	2057.5	9.2	0	12.83	0.1
4861.2	2057.1	11.6	0	13.13	0.111
4862.3	2056.6	13.7	0	13.43	0.121
4863.5	2056.1	15.7	0	13.76	0.132
4864.6	2055.7	17.3	0	14.11	0.142
4859.9	2057.7	0.4	10	11.55	0.061
4860.6	2057.4	1.5	10	11.8	0.069
4861.5	2057	3.4	10	12.09	0.08
4862.5	2056.6	5.2	10	12.38	0.09
4863.5	2056.1	7.2	10	12.66	0.1
4864.6	2055.7	9.2	10	12.95	0.111
4865.7	2055.2	11.1	10	13.24	0.121
4866.9	2054.7	13	10	13.54	0.132
4868.1	2054.2	14.6	10	13.87	0.142
4863.6	2056.1	0.4	20	11.58	0.066
4864.9	2055.6	2.2	20	11.96	0.08
4865.8	2055.1	3.8	20	12.23	0.09
4866.9	2054.7	5.5	20	12.51	0.1
4867.9	2054.3	7.2	20	12.78	0.111
4869.1	2053.8	8.8	20	13.07	0.121
4870.3	2053.3	10.5	20	13.36	0.132
4871.5	2052.7	11.9	20	13.65	0.142
4872.9	2052.2	13.1	20	13.96	0.152
4867.6	2054.4	0.3	30	11.64	0.072
4868.3	2054.1	1.2	30	11.86	0.08
4869.3	2053.7	2.5	30	12.13	0.09
4870.3	2053.2	4	30	12.4	0.1

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4871.5	2052.8	5.4	30	12.66	0.111
4872.6	2052.3	6.9	30	12.93	0.121
4873.8	2051.8	8.3	30	13.2	0.132
4875.1	2051.3	9.5	30	13.48	0.142
4876.4	2050.7	10.6	30	13.77	0.152
4871.6	2052.7	0.3	40	11.69	0.078
4872.8	2052.2	1.5	40	11.99	0.09
4873.8	2051.8	2.7	40	12.25	0.1
4875	2051.3	3.8	40	12.51	0.111
4876.1	2050.8	5.1	40	12.76	0.121
4877.4	2050.3	6.3	40	13.02	0.132
4878.6	2049.8	7.3	40	13.28	0.142
4880	2049.2	8.2	40	13.56	0.152
4875.8	2051	0.2	50	11.76	0.084
4876.3	2050.7	0.6	50	11.88	0.09
4877.4	2050.3	1.5	50	12.13	0.1
4878.5	2049.8	2.5	50	12.38	0.111
4879.7	2049.3	3.5	50	12.62	0.121
4880.9	2048.8	4.5	50	12.87	0.132
4882.2	2048.3	5.4	50	13.12	0.142
4883.6	2047.7	6.2	50	13.37	0.152

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

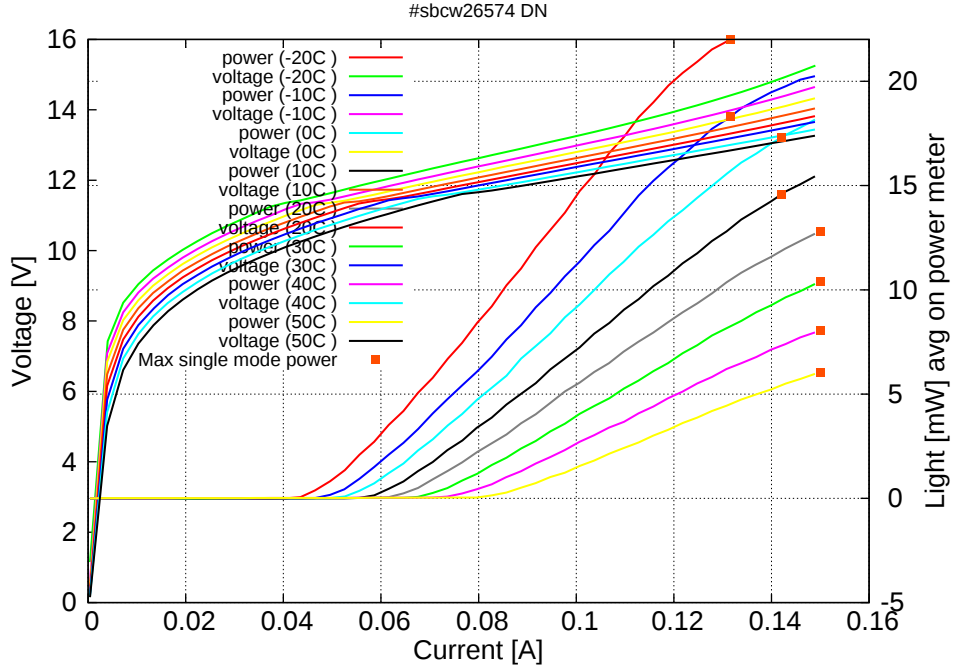


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=11.6V$ (2-wires measurements). Maximum operation

current: 0.13A between -20C and -10C, 0.14A between 0C and 10C, 0.15A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

