

Datasheet for #sbcw26575 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 #sbcw26575 DN (please note that AlN submount numbering is A0YDU)

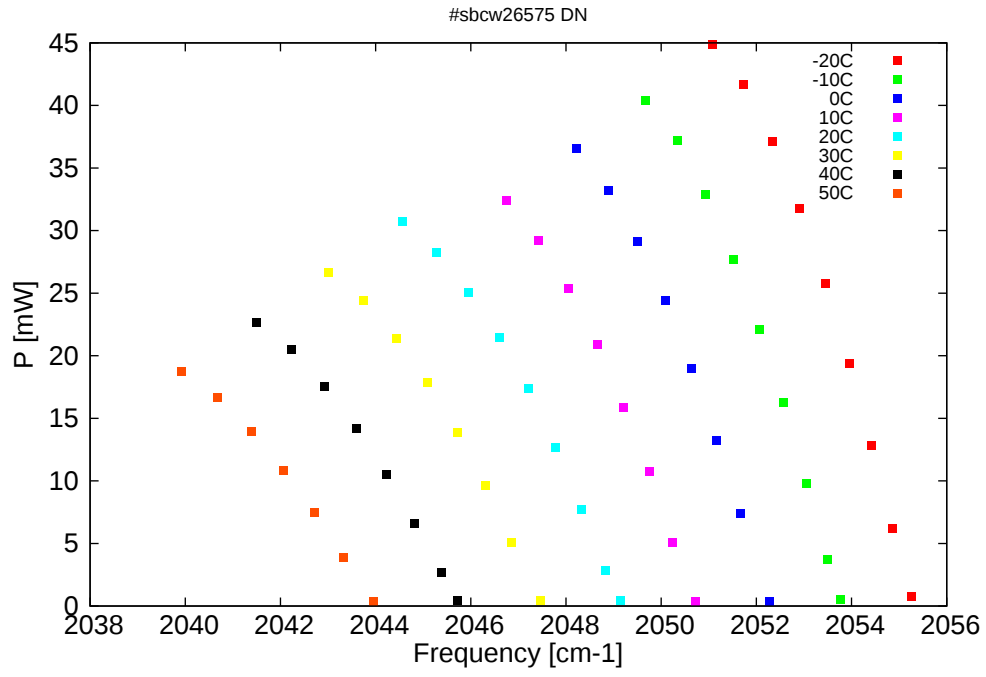


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

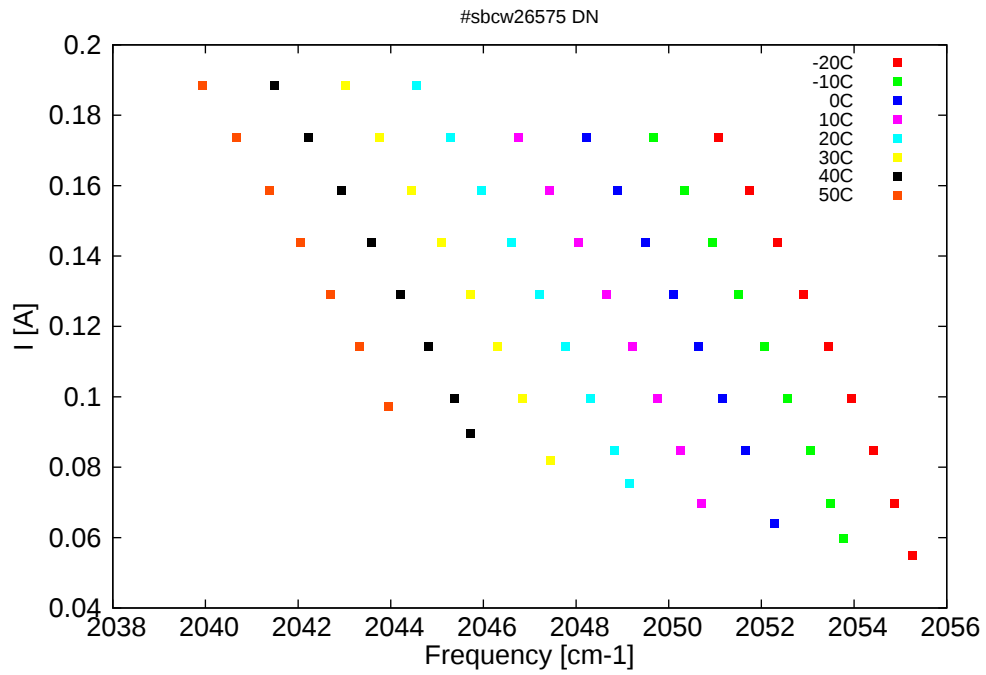


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4865.6	2055.3	0.8	-20	10.92	0.055
4866.5	2054.9	6.2	-20	11.28	0.07
4867.6	2054.4	12.8	-20	11.61	0.085
4868.7	2054	19.4	-20	11.92	0.1
4869.9	2053.4	25.8	-20	12.21	0.114
4871.1	2052.9	31.8	-20	12.5	0.129
4872.5	2052.3	37.2	-20	12.8	0.144
4873.9	2051.7	41.7	-20	13.12	0.159
4875.5	2051.1	44.8	-20	13.46	0.174
4869.1	2053.8	0.5	-10	10.92	0.06
4869.8	2053.5	3.7	-10	11.15	0.07
4870.8	2053.1	9.8	-10	11.47	0.085
4871.9	2052.6	16.2	-10	11.78	0.1
4873.2	2052.1	22.1	-10	12.07	0.114
4874.5	2051.5	27.7	-10	12.35	0.129
4875.8	2050.9	32.9	-10	12.64	0.144
4877.3	2050.3	37.2	-10	12.95	0.159
4878.8	2049.7	40.4	-10	13.27	0.174
4872.6	2052.3	0.4	0	10.9	0.064
4874.1	2051.7	7.4	0	11.35	0.085
4875.3	2051.2	13.2	0	11.65	0.1
4876.5	2050.6	19	0	11.93	0.114
4877.8	2050.1	24.4	0	12.21	0.129
4879.2	2049.5	29.2	0	12.5	0.144
4880.7	2048.9	33.2	0	12.78	0.159
4882.3	2048.2	36.6	0	13.09	0.174
4876.4	2050.7	0.4	10	10.93	0.07
4877.5	2050.2	5.1	10	11.23	0.085
4878.6	2049.7	10.7	10	11.53	0.1
4879.9	2049.2	15.9	10	11.82	0.114
4881.3	2048.7	20.9	10	12.09	0.129
4882.7	2048.1	25.4	10	12.37	0.144
4884.2	2047.4	29.2	10	12.65	0.159
4885.8	2046.8	32.4	10	12.94	0.174
4880.1	2049.1	0.5	20	10.95	0.076
4880.8	2048.8	2.8	20	11.13	0.085
4882	2048.3	7.7	20	11.42	0.1
4883.3	2047.8	12.7	20	11.71	0.114
4884.7	2047.2	17.3	20	11.98	0.129
4886.2	2046.6	21.5	20	12.25	0.144
4887.7	2046	25.1	20	12.53	0.159
4889.3	2045.3	28.2	20	12.81	0.174
4891	2044.6	30.8	20	13.1	0.188
4884.1	2047.5	0.4	30	10.99	0.082
4885.5	2046.9	5.1	30	11.32	0.1
4886.9	2046.3	9.6	30	11.6	0.114
4888.3	2045.7	13.9	30	11.88	0.129
4889.7	2045.1	17.8	30	12.14	0.144
4891.3	2044.4	21.4	30	12.41	0.159

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4893	2043.7	24.4	30	12.68	0.174
4894.7	2043	26.7	30	12.97	0.188
4888.2	2045.7	0.4	40	11.06	0.09
4889.1	2045.4	2.7	40	11.24	0.1
4890.4	2044.8	6.6	40	11.51	0.114
4891.8	2044.2	10.5	40	11.78	0.129
4893.3	2043.6	14.2	40	12.04	0.144
4894.9	2042.9	17.6	40	12.31	0.159
4896.6	2042.2	20.5	40	12.58	0.174
4898.4	2041.5	22.7	40	12.85	0.188
4892.5	2044	0.4	50	11.14	0.097
4894	2043.3	3.9	50	11.43	0.114
4895.5	2042.7	7.5	50	11.7	0.129
4897	2042.1	10.8	50	11.96	0.144
4898.6	2041.4	14	50	12.22	0.159
4900.3	2040.7	16.7	50	12.48	0.174
4902.1	2039.9	18.8	50	12.75	0.188

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

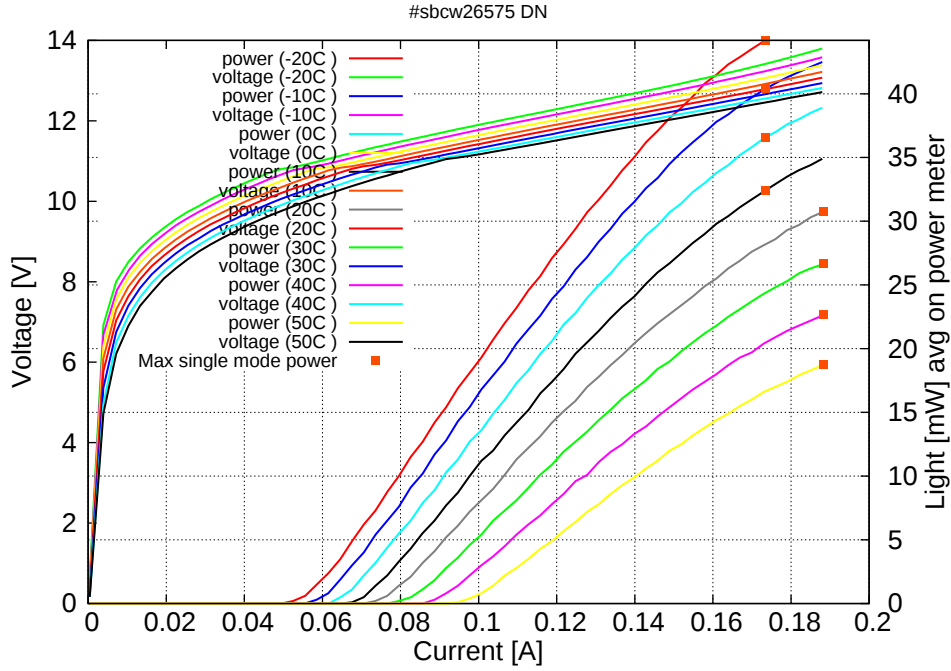


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=10.9V$ (2-wires measurements). Maximum operation current: 0.175A between -20C and 10C, 0.19A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

