

Datasheet for #sbcw25715 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 #sbcw25715 DN (please note that AlN submount numbering is A0X5E)

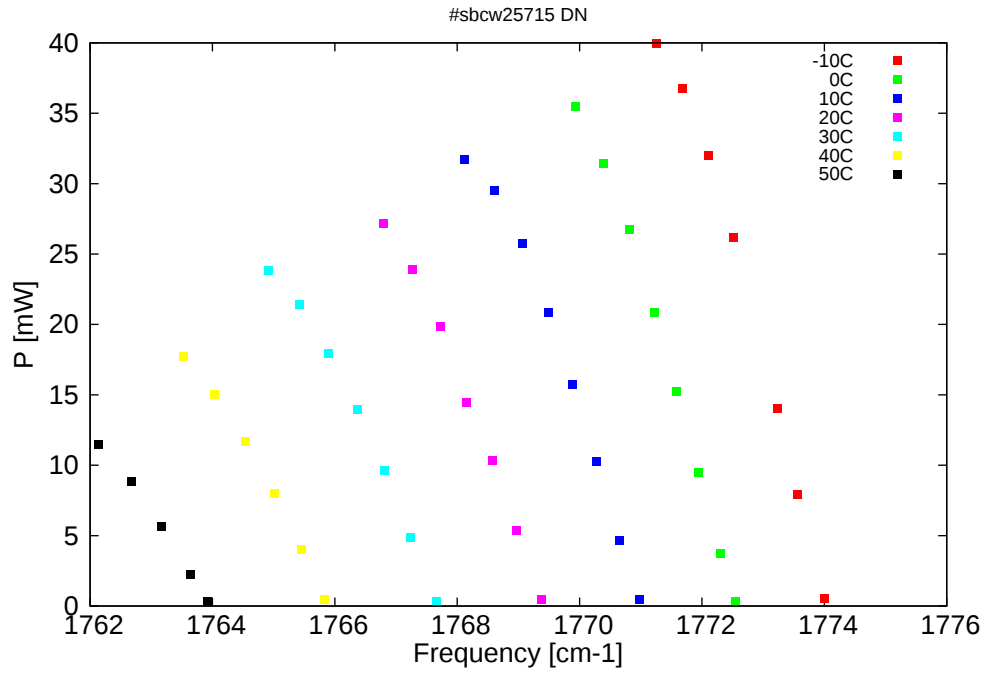


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

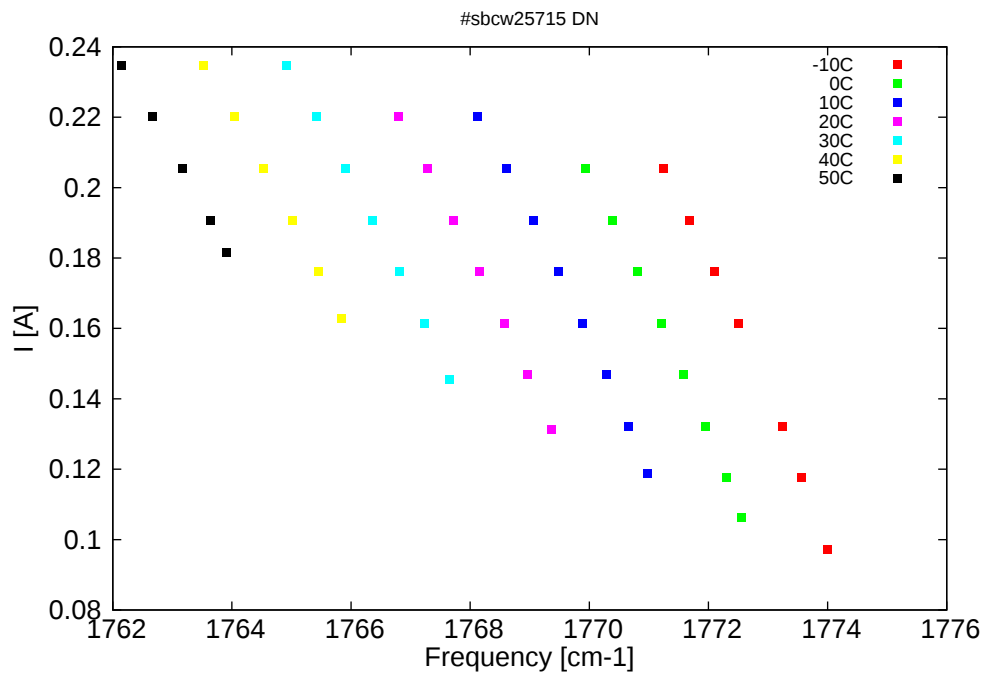


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5637	1774	0.6	-10	9.4	0.097
5638.4	1773.6	7.9	-10	9.69	0.118
5639.4	1773.2	14	-10	9.9	0.132
5641.7	1772.5	26.2	-10	10.31	0.162
5643	1772.1	32	-10	10.52	0.176
5644.3	1771.7	36.7	-10	10.72	0.191
5645.7	1771.3	39.9	-10	10.93	0.205
5641.6	1772.6	0.4	0	9.39	0.106
5642.4	1772.3	3.7	0	9.55	0.118
5643.5	1772	9.5	0	9.76	0.132
5644.6	1771.6	15.2	0	9.96	0.147
5645.8	1771.2	20.9	0	10.16	0.162
5647.1	1770.8	26.7	0	10.36	0.176
5648.5	1770.4	31.4	0	10.57	0.191
5649.9	1769.9	35.5	0	10.77	0.205
5646.6	1771	0.5	10	9.44	0.119
5647.6	1770.7	4.7	10	9.62	0.132
5648.8	1770.3	10.3	10	9.82	0.147
5650.1	1769.9	15.8	10	10.02	0.162
5651.3	1769.5	20.8	10	10.21	0.176
5652.7	1769.1	25.7	10	10.41	0.191
5654.2	1768.6	29.5	10	10.61	0.205
5655.7	1768.1	31.7	10	10.81	0.22
5651.7	1769.4	0.5	20	9.48	0.131
5653	1769	5.3	20	9.69	0.147
5654.3	1768.6	10.3	20	9.88	0.161
5655.6	1768.2	14.4	20	10.07	0.176
5657	1767.7	19.8	20	10.26	0.191
5658.4	1767.3	23.9	20	10.46	0.205
5660	1766.8	27.2	20	10.66	0.22
5657.2	1767.7	0.3	30	9.55	0.145
5658.6	1767.2	4.8	30	9.75	0.161
5659.9	1766.8	9.6	30	9.94	0.176
5661.3	1766.4	13.9	30	10.12	0.191
5662.8	1765.9	17.9	30	10.31	0.205
5664.4	1765.4	21.4	30	10.51	0.22
5666	1764.9	23.8	30	10.7	0.235
5663	1765.8	0.4	40	9.64	0.163
5664.3	1765.5	4	40	9.81	0.176
5665.7	1765	8	40	9.99	0.191
5667.2	1764.5	11.7	40	10.17	0.205
5668.8	1764	15	40	10.36	0.22
5670.5	1763.5	17.7	40	10.55	0.235
5669.2	1763.9	0.3	50	9.75	0.182
5670.1	1763.6	2.3	50	9.86	0.191
5671.6	1763.2	5.7	50	10.04	0.205
5673.2	1762.7	8.9	50	10.22	0.22
5674.9	1762.1	11.4	50	10.4	0.235

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Table 1: $\lambda[\text{nm}]$ $\nu[\text{cm}^{-1}]$ $P[\text{mW}]$ $\text{Temp}[\text{°C}]$ $U_{LASER}[\text{V}]$ $I[\text{A}]$
 Table 1: Singlemode optical output power as function of operating parameters.

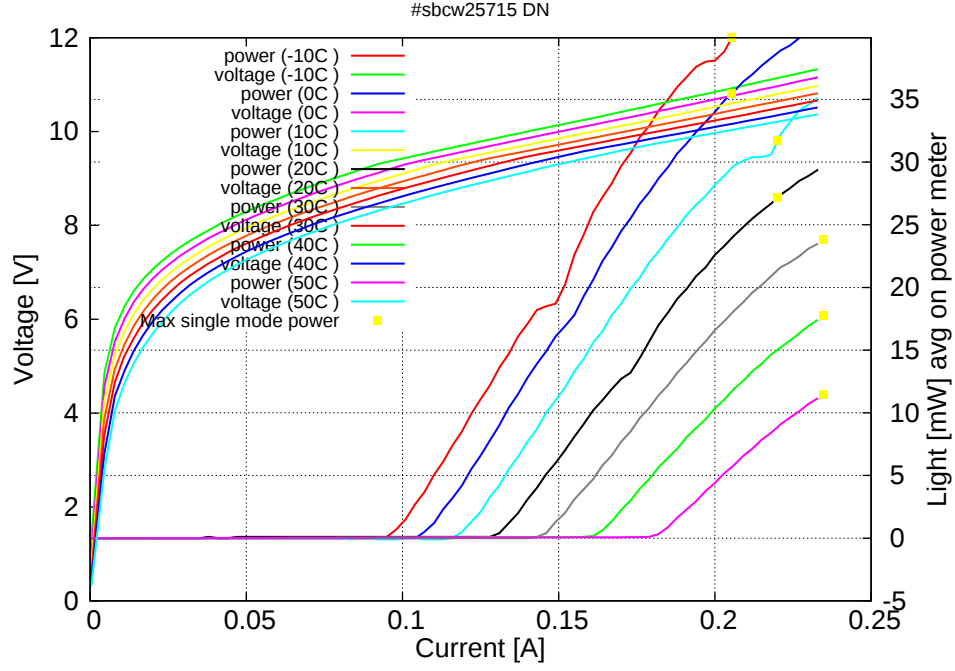


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.10\text{A}$ / $V_{th}=9.4\text{V}$ (2-wires measurements). Maximum operation current: 0.205A between -10C and 0C, 0.22A between 10C and 20C, 0.35A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

