

Datasheet for #sbcw25719 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.

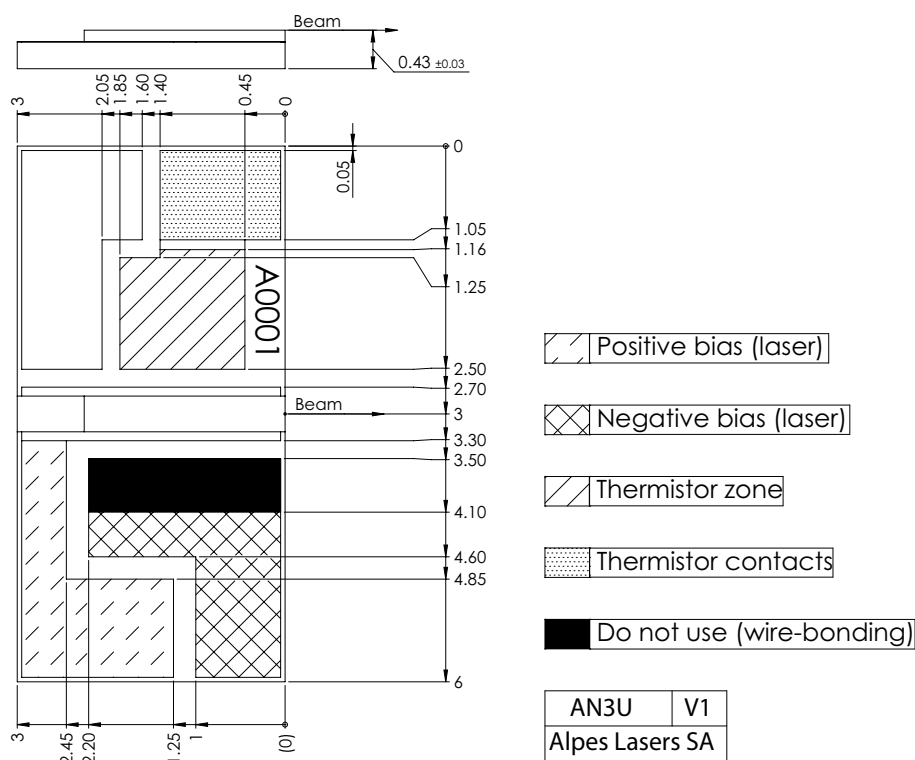


Figure 1: Mechanical and electrical interface for #sbcw25719 DN (please note that AlN submount numbering is A0V40)

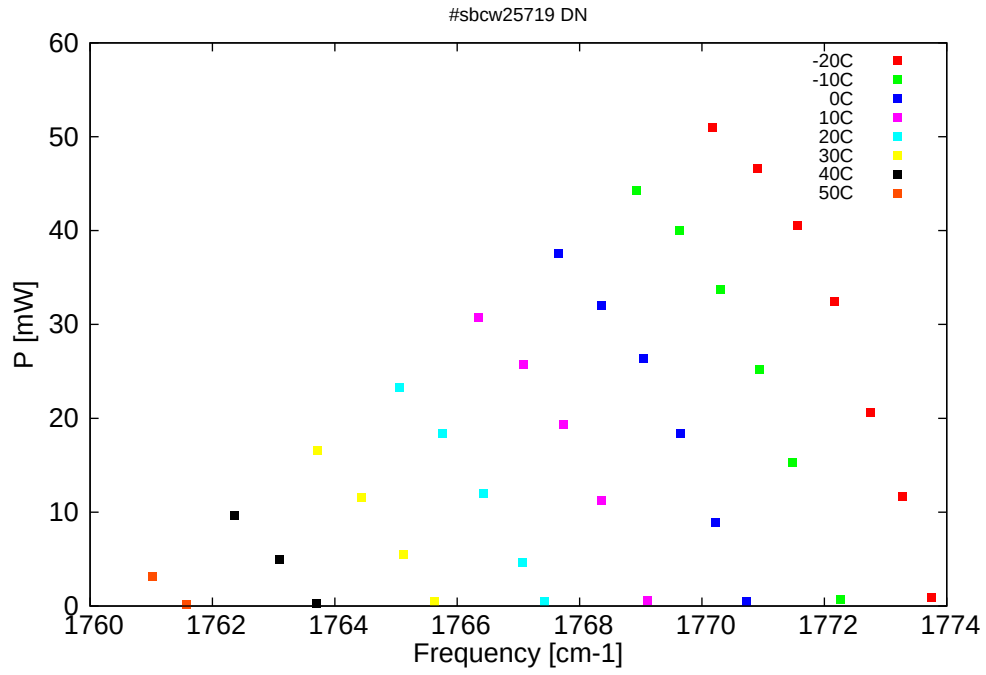


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

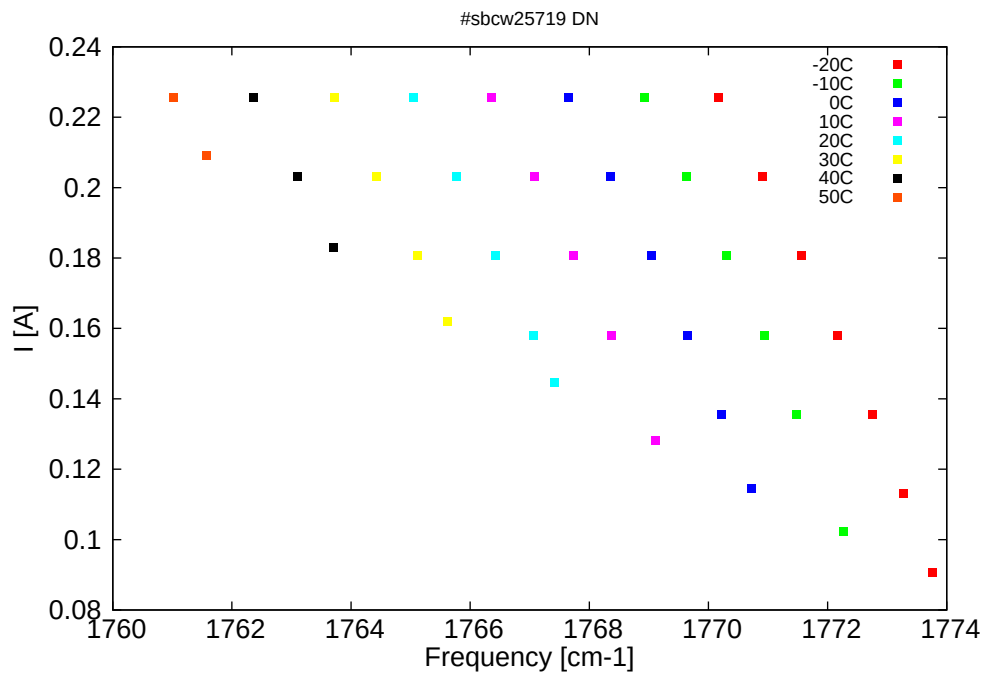


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5637.7	1773.8	1	-20	10.19	0.091
5639.3	1773.3	11.7	-20	10.63	0.113
5640.9	1772.8	20.6	-20	11.03	0.136
5642.8	1772.2	32.4	-20	11.4	0.158
5644.8	1771.6	40.5	-20	11.76	0.181
5646.8	1770.9	46.7	-20	12.09	0.203
5649.2	1770.2	50.9	-20	12.41	0.226
5642.5	1772.3	0.7	-10	10.16	0.102
5645	1771.5	15.3	-10	10.74	0.136
5646.7	1770.9	25.2	-10	11.11	0.158
5648.8	1770.3	33.7	-10	11.45	0.181
5650.9	1769.6	40	-10	11.78	0.203
5653.1	1768.9	44.3	-10	12.08	0.226
5647.4	1770.7	0.5	0	10.12	0.115
5649	1770.2	8.9	0	10.47	0.136
5650.8	1769.7	18.4	0	10.82	0.158
5652.8	1769	26.4	0	11.16	0.181
5655	1768.4	32	0	11.47	0.203
5657.2	1767.7	37.5	0	11.77	0.226
5652.5	1769.1	0.6	10	10.09	0.128
5654.9	1768.4	11.2	10	10.55	0.158
5656.9	1767.7	19.4	10	10.86	0.181
5659.1	1767.1	25.7	10	11.17	0.203
5661.4	1766.4	30.7	10	11.45	0.226
5658	1767.4	0.5	20	10.09	0.145
5659.1	1767.1	4.6	20	10.28	0.158
5661.1	1766.4	12	20	10.6	0.181
5663.3	1765.8	18.4	20	10.89	0.203
5665.5	1765.1	23.3	20	11.17	0.226
5663.7	1765.6	0.5	30	10.1	0.162
5665.4	1765.1	5.5	30	10.34	0.181
5667.5	1764.4	11.5	30	10.63	0.203
5669.8	1763.7	16.6	30	10.89	0.226
5669.9	1763.7	0.3	40	10.15	0.183
5671.8	1763.1	4.9	40	10.39	0.203
5674.2	1762.4	9.6	40	10.65	0.226
5676.7	1761.6	0.2	50	10.24	0.209
5678.5	1761	3.2	50	10.43	0.226

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

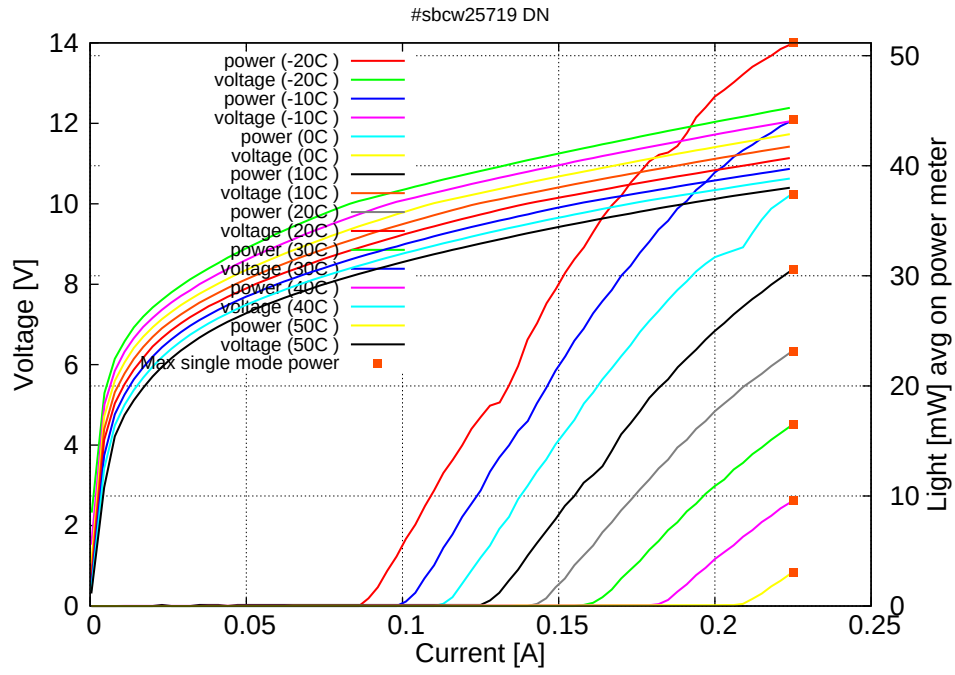


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=10.1V$ (2-wires measurements). Maximum operation current: 0.225A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

