

**Datasheet for #sbcw25709 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 #sbcw25709 DN (please note that AlN submount numbering is A0X8F)

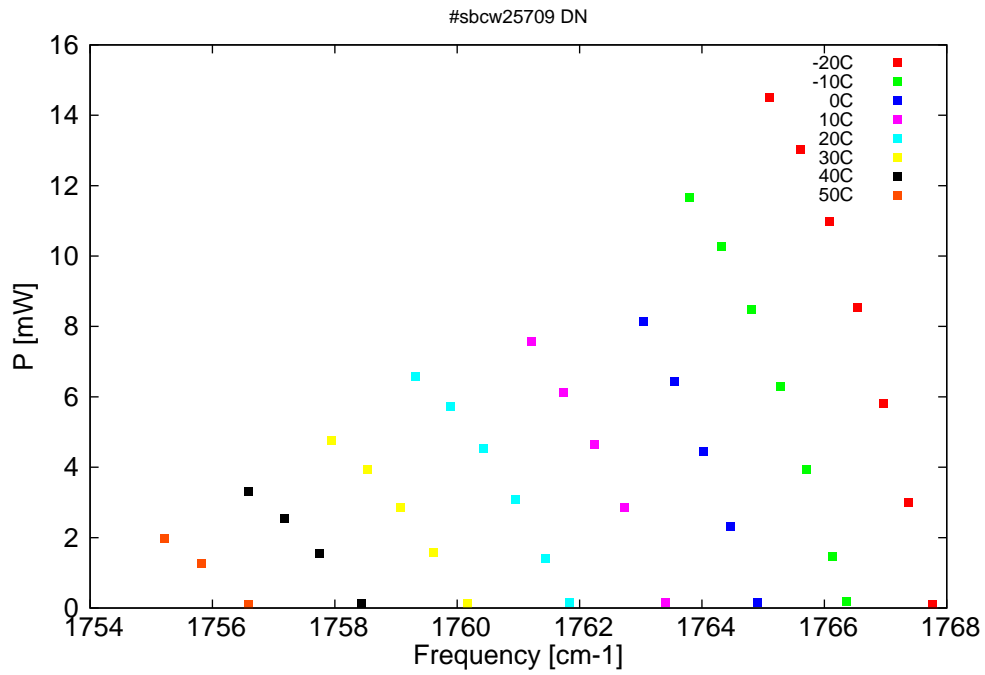


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

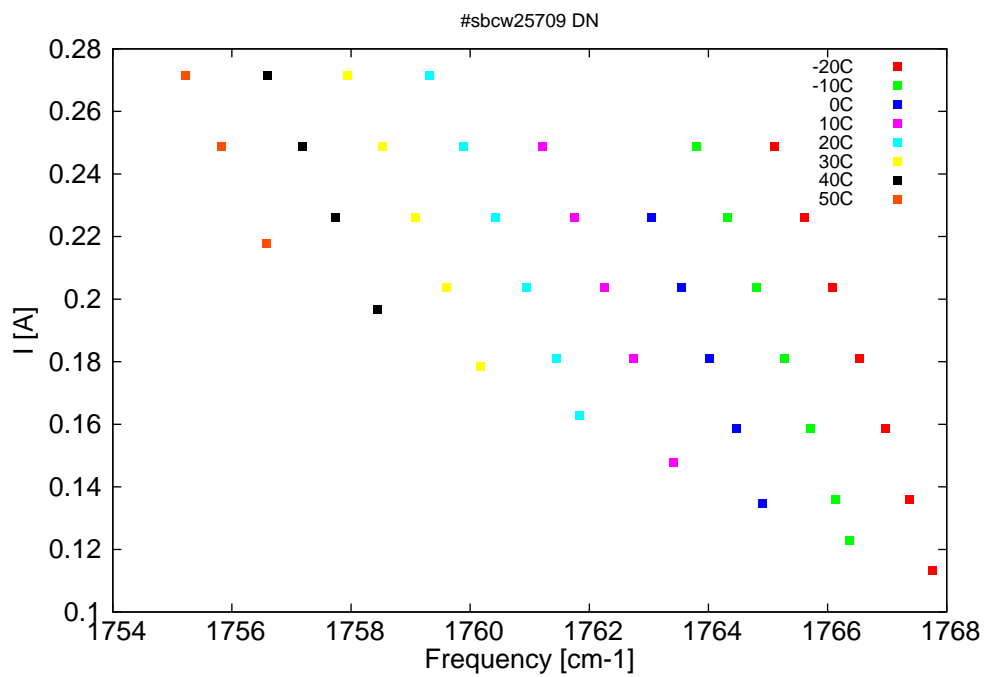


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5656.8	1767.8	0.1	-20	9.25	0.113
5658.1	1767.4	3	-20	9.54	0.136
5659.4	1767	5.8	-20	9.82	0.159
5660.8	1766.5	8.5	-20	10.08	0.181
5662.3	1766.1	11	-20	10.33	0.204
5663.8	1765.6	13	-20	10.58	0.226
5665.4	1765.1	14.5	-20	10.82	0.249
5661.3	1766.4	0.2	-10	9.2	0.123
5662.1	1766.1	1.5	-10	9.36	0.136
5663.4	1765.7	3.9	-10	9.63	0.159
5664.8	1765.3	6.3	-10	9.89	0.181
5666.3	1764.8	8.5	-10	10.14	0.204
5667.9	1764.3	10.3	-10	10.38	0.226
5669.6	1763.8	11.7	-10	10.62	0.249
5666	1764.9	0.2	0	9.18	0.135
5667.4	1764.5	2.3	0	9.47	0.159
5668.9	1764	4.5	0	9.72	0.181
5670.4	1763.5	6.4	0	9.97	0.204
5672	1763	8.1	0	10.21	0.226
5670.8	1763.4	0.2	10	9.18	0.148
5673	1762.7	2.9	10	9.56	0.181
5674.6	1762.2	4.6	10	9.8	0.204
5676.2	1761.7	6.1	10	10.04	0.226
5677.9	1761.2	7.6	10	10.27	0.249
5675.9	1761.8	0.2	20	9.2	0.163
5677.2	1761.4	1.4	20	9.4	0.181
5678.7	1761	3.1	20	9.64	0.204
5680.4	1760.4	4.5	20	9.87	0.226
5682.2	1759.9	5.7	20	10.1	0.249
5684	1759.3	6.6	20	10.32	0.271
5681.3	1760.2	0.1	30	9.23	0.178
5683.1	1759.6	1.6	30	9.49	0.204
5684.8	1759.1	2.9	30	9.71	0.226
5686.6	1758.5	3.9	30	9.94	0.249
5688.5	1757.9	4.8	30	10.16	0.271
5686.9	1758.4	0.1	40	9.28	0.197
5689.1	1757.7	1.6	40	9.56	0.226
5690.9	1757.2	2.6	40	9.78	0.249
5692.8	1756.6	3.3	40	10	0.271
5692.9	1756.6	0.1	50	9.34	0.218
5695.3	1755.8	1.3	50	9.63	0.249
5697.3	1755.2	2	50	9.84	0.271

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

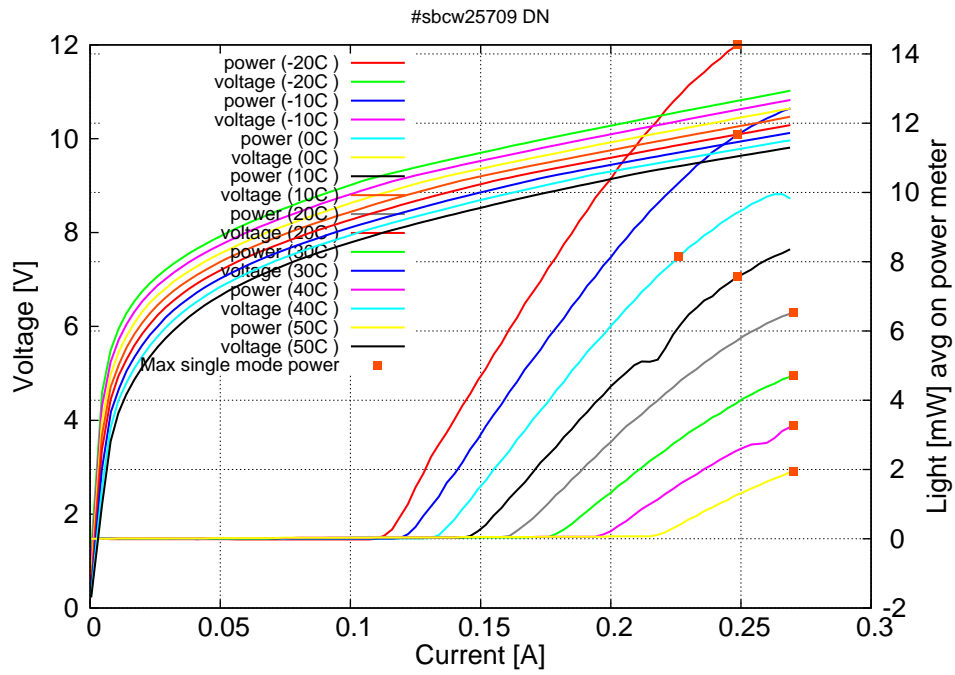


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=9.2V$  (2-wires measurements). Maximum operation current: 0.25A between -20C and 10C, 0.27A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

