

Datasheet for #sbcw25708 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 #sbcw25708 DN (please note that AlN submount numbering is A0X7G)

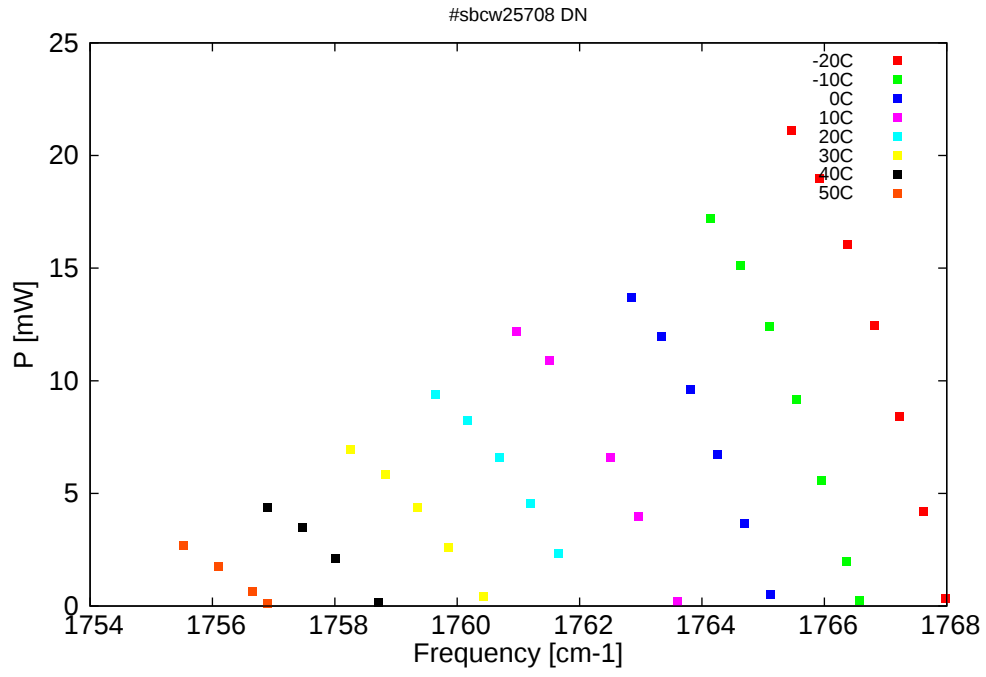


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

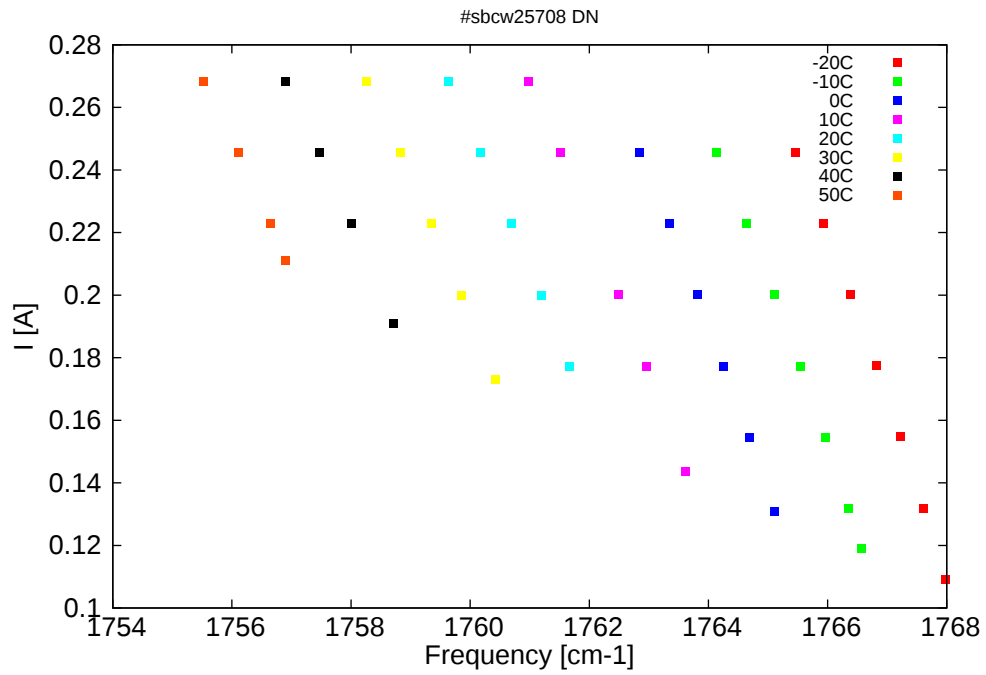


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5656.1	1768	0.3	-20	8.93	0.109
5657.3	1767.6	4.2	-20	9.21	0.132
5658.6	1767.2	8.4	-20	9.47	0.155
5659.9	1766.8	12.5	-20	9.71	0.177
5661.3	1766.4	16.1	-20	9.94	0.2
5662.7	1765.9	19	-20	10.17	0.223
5664.3	1765.5	21.1	-20	10.4	0.246
5660.7	1766.6	0.2	-10	8.89	0.119
5661.4	1766.4	2	-10	9.04	0.132
5662.6	1766	5.6	-10	9.3	0.155
5664	1765.5	9.2	-10	9.54	0.177
5665.4	1765.1	12.4	-10	9.77	0.2
5666.9	1764.6	15.1	-10	10	0.223
5668.5	1764.1	17.2	-10	10.22	0.246
5665.3	1765.1	0.5	0	8.88	0.131
5666.7	1764.7	3.7	0	9.14	0.155
5668.1	1764.3	6.7	0	9.39	0.177
5669.5	1763.8	9.6	0	9.61	0.2
5671	1763.3	12	0	9.84	0.223
5672.7	1762.8	13.7	0	10.06	0.246
5670.2	1763.6	0.2	10	8.88	0.144
5672.3	1763	4	10	9.24	0.177
5673.8	1762.5	6.6	10	9.47	0.2
5676.9	1761.5	10.9	10	9.9	0.246
5678.7	1761	12.2	10	10.12	0.268
5676.5	1761.7	2.3	20	9.1	0.177
5678	1761.2	4.5	20	9.33	0.2
5679.6	1760.7	6.6	20	9.54	0.223
5681.3	1760.2	8.2	20	9.76	0.246
5683	1759.6	9.4	20	9.97	0.268
5680.4	1760.4	0.4	30	8.93	0.173
5682.3	1759.9	2.6	30	9.2	0.2
5683.9	1759.4	4.4	30	9.41	0.223
5685.6	1758.8	5.8	30	9.62	0.246
5687.4	1758.3	7	30	9.83	0.268
5686	1758.7	0.1	40	8.98	0.191
5688.3	1758	2.1	40	9.28	0.223
5690	1757.5	3.5	40	9.49	0.246
5691.8	1756.9	4.4	40	9.69	0.268
5691.8	1756.9	0.1	50	9.05	0.211
5692.6	1756.7	0.6	50	9.16	0.223
5694.4	1756.1	1.8	50	9.36	0.246
5696.3	1755.5	2.7	50	9.56	0.268

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

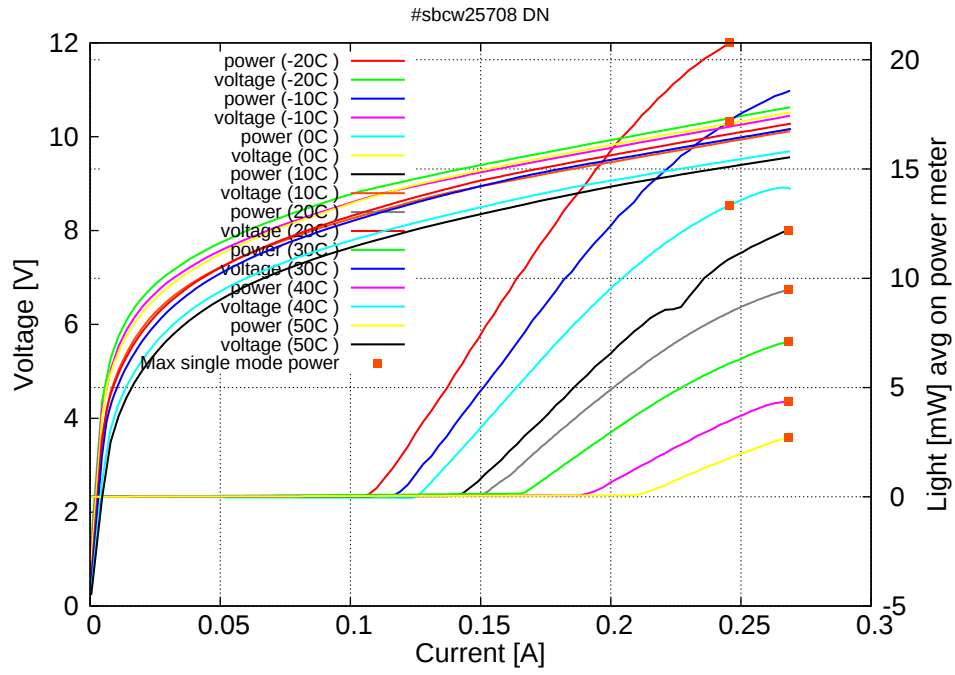


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.245A between -20C and 0C, 0.27A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

