

**Datasheet for #sbcw25706 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 #sbcw25706 DN (please note that AlN submount numbering is A0X3C)

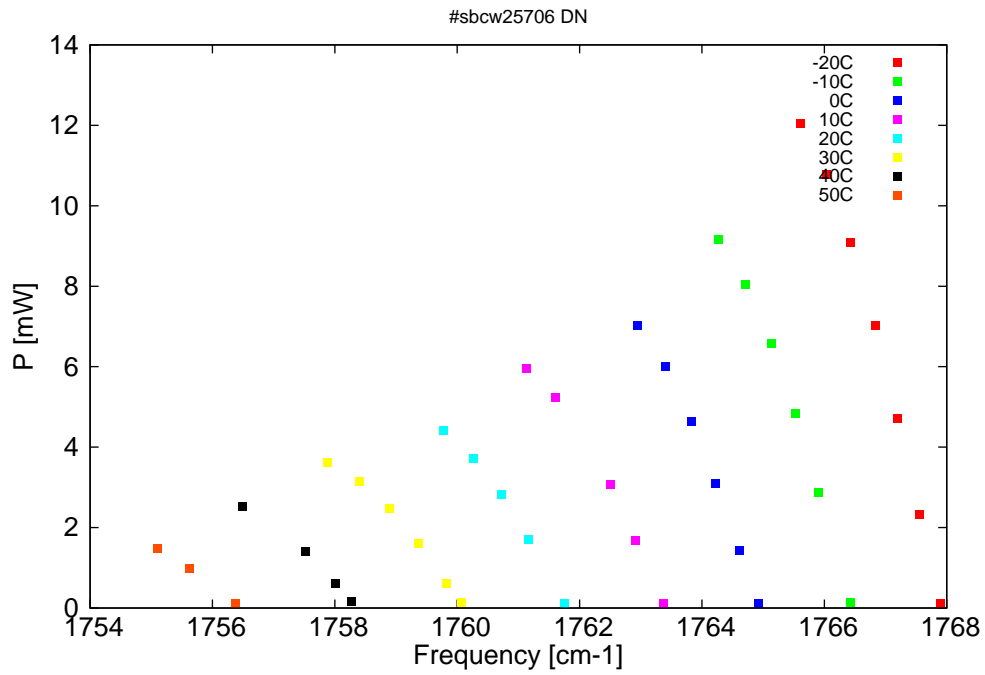


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

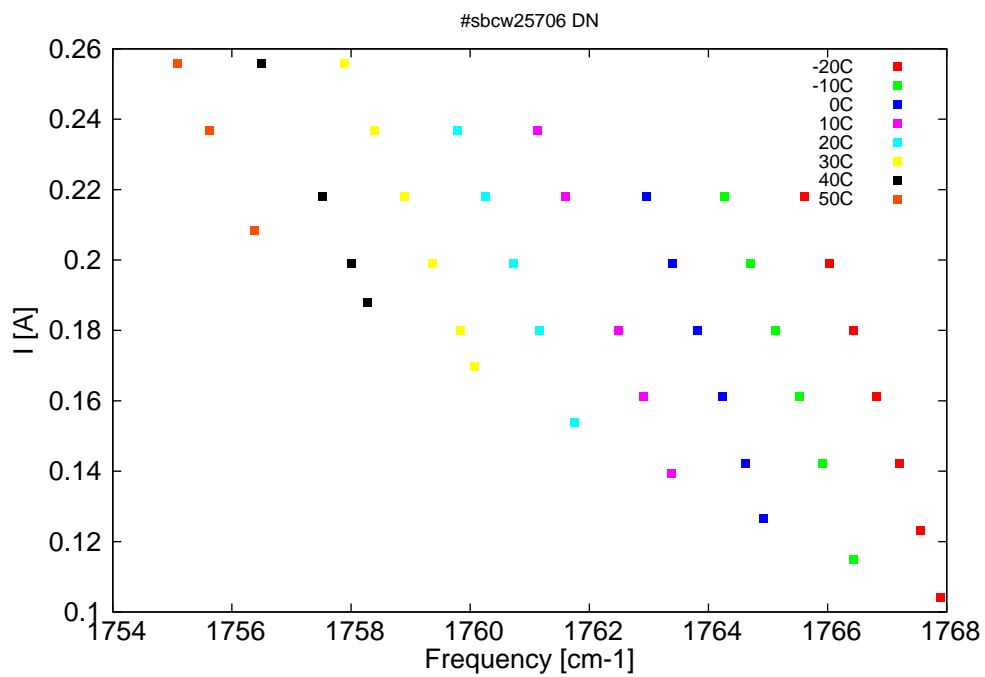


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5656.4	1767.9	0.1	-20	8.87	0.104
5657.5	1767.6	2.3	-20	9.1	0.123
5658.7	1767.2	4.7	-20	9.32	0.142
5659.9	1766.8	7	-20	9.52	0.161
5661.1	1766.4	9.1	-20	9.71	0.18
5662.4	1766	10.8	-20	9.9	0.199
5663.8	1765.6	12	-20	10.09	0.218
5661.1	1766.4	0.1	-10	8.84	0.115
5662.8	1765.9	2.9	-10	9.15	0.142
5664	1765.5	4.8	-10	9.35	0.161
5665.3	1765.1	6.6	-10	9.55	0.18
5666.7	1764.7	8	-10	9.73	0.199
5668.1	1764.3	9.2	-10	9.92	0.218
5666	1764.9	0.1	0	8.82	0.127
5666.9	1764.6	1.4	0	9	0.142
5668.2	1764.2	3.1	0	9.2	0.161
5669.5	1763.8	4.6	0	9.39	0.18
5670.9	1763.4	6	0	9.58	0.199
5672.3	1763	7	0	9.76	0.218
5671	1763.4	0.1	10	8.83	0.139
5672.4	1762.9	1.7	10	9.05	0.161
5673.8	1762.5	3.1	10	9.25	0.18
5676.6	1761.6	5.2	10	9.61	0.218
5678.2	1761.1	5.9	10	9.79	0.237
5676.1	1761.8	0.1	20	8.84	0.154
5678	1761.2	1.7	20	9.1	0.18
5679.5	1760.7	2.8	20	9.29	0.199
5681	1760.3	3.7	20	9.47	0.218
5682.5	1759.8	4.4	20	9.65	0.237
5681.6	1760.1	0.1	30	8.88	0.17
5682.4	1759.8	0.6	30	8.98	0.18
5683.8	1759.4	1.6	30	9.16	0.199
5685.4	1758.9	2.5	30	9.34	0.218
5687	1758.4	3.1	30	9.51	0.237
5688.7	1757.9	3.6	30	9.68	0.256
5687.4	1758.3	0.2	40	8.93	0.188
5688.3	1758	0.6	40	9.03	0.199
5689.8	1757.5	1.4	40	9.21	0.218
5693.2	1756.5	2.5	40	9.55	0.256
5693.5	1756.4	0.1	50	9	0.209
5696	1755.6	1	50	9.26	0.237
5697.7	1755.1	1.5	50	9.43	0.256

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

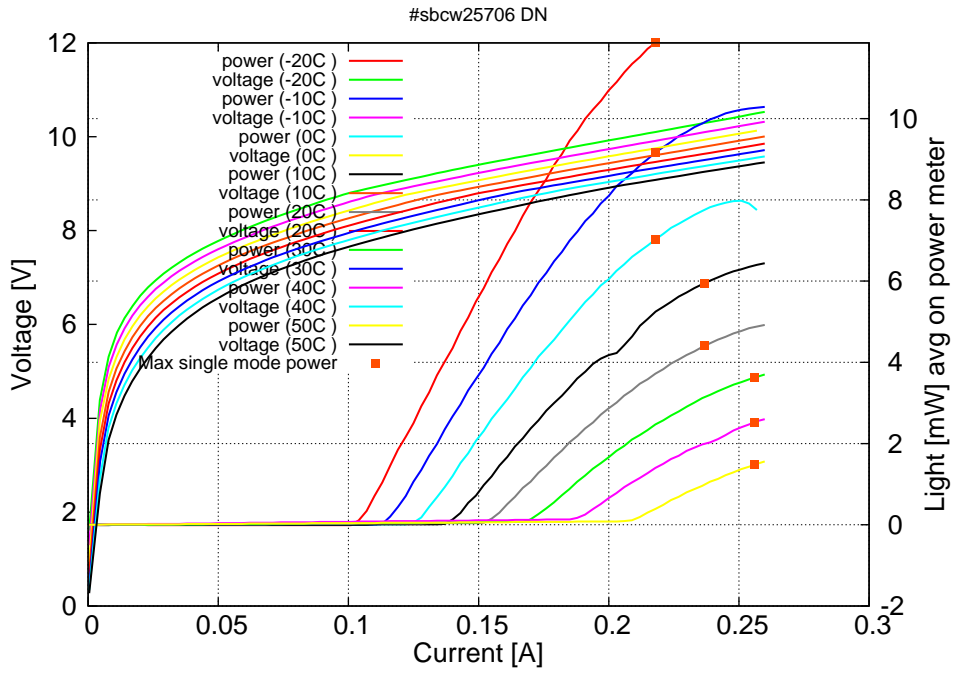


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.10A$  /  $V_{th}=8.9V$  (2-wires measurements). Maximum operation current: 0.22A between -20C and 0C, 0.24A between 10C and 20C, 0.26A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

