

Datasheet for #sbcw25705 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 #sbcw25705 DN (please note that AlN submount numbering is A0X4X)

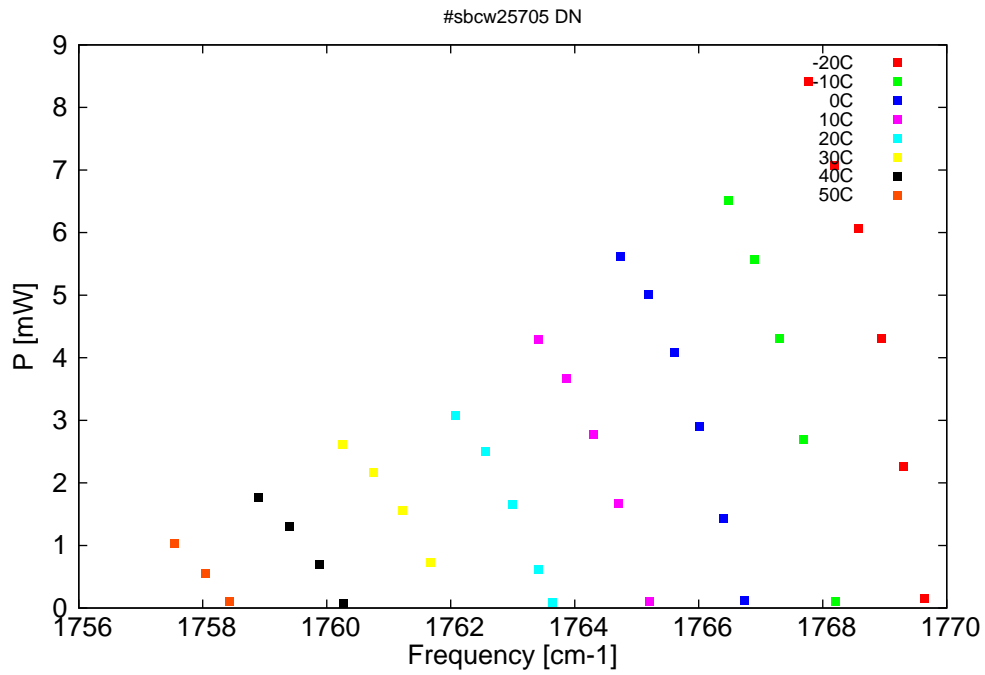


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

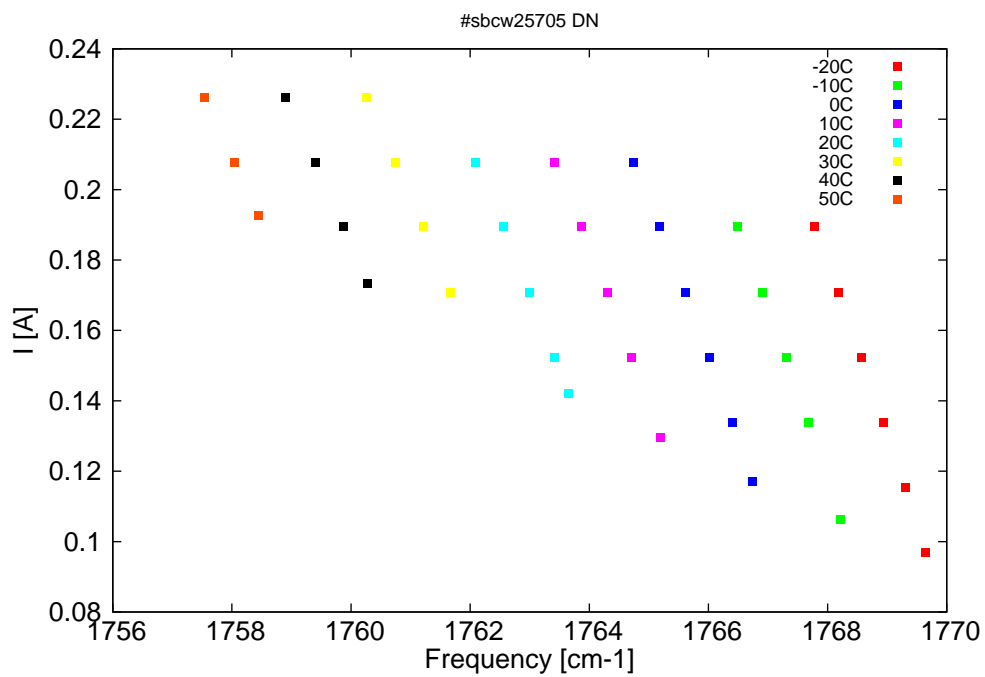


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5650.8	1769.6	0.2	-20	9.31	0.097
5651.9	1769.3	2.3	-20	9.58	0.116
5653.1	1768.9	4.3	-20	9.82	0.134
5654.3	1768.6	6.1	-20	10.06	0.152
5655.5	1768.2	7.1	-20	10.28	0.171
5656.8	1767.8	8.4	-20	10.51	0.189
5655.4	1768.2	0.1	-10	9.27	0.106
5657.1	1767.7	2.7	-10	9.64	0.134
5658.3	1767.3	4.3	-10	9.87	0.152
5659.6	1766.9	5.6	-10	10.09	0.171
5661	1766.5	6.5	-10	10.31	0.189
5660.1	1766.7	0.1	0	9.26	0.117
5661.2	1766.4	1.4	0	9.48	0.134
5662.5	1766	2.9	0	9.7	0.152
5663.8	1765.6	4.1	0	9.92	0.171
5665.1	1765.2	5	0	10.13	0.189
5666.6	1764.7	5.6	0	10.34	0.208
5665.1	1765.2	0.1	10	9.27	0.13
5666.6	1764.7	1.7	10	9.55	0.152
5668	1764.3	2.8	10	9.76	0.171
5669.4	1763.9	3.7	10	9.98	0.189
5670.8	1763.4	4.3	10	10.18	0.208
5670.1	1763.6	0.1	20	9.27	0.142
5670.8	1763.4	0.6	20	9.39	0.152
5672.2	1763	1.7	20	9.61	0.171
5673.6	1762.6	2.5	20	9.82	0.189
5675.1	1762.1	3.1	20	10.02	0.208
5676.4	1761.7	0.7	30	9.46	0.171
5677.9	1761.2	1.6	30	9.66	0.189
5679.4	1760.7	2.2	30	9.86	0.208
5681	1760.3	2.6	30	10.05	0.226
5680.9	1760.3	0.1	40	9.33	0.173
5682.2	1759.9	0.7	40	9.51	0.189
5683.8	1759.4	1.3	40	9.7	0.208
5685.4	1758.9	1.8	40	9.9	0.226
5686.9	1758.4	0.1	50	9.4	0.193
5688.1	1758	0.5	50	9.56	0.208
5689.8	1757.5	1	50	9.74	0.226

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

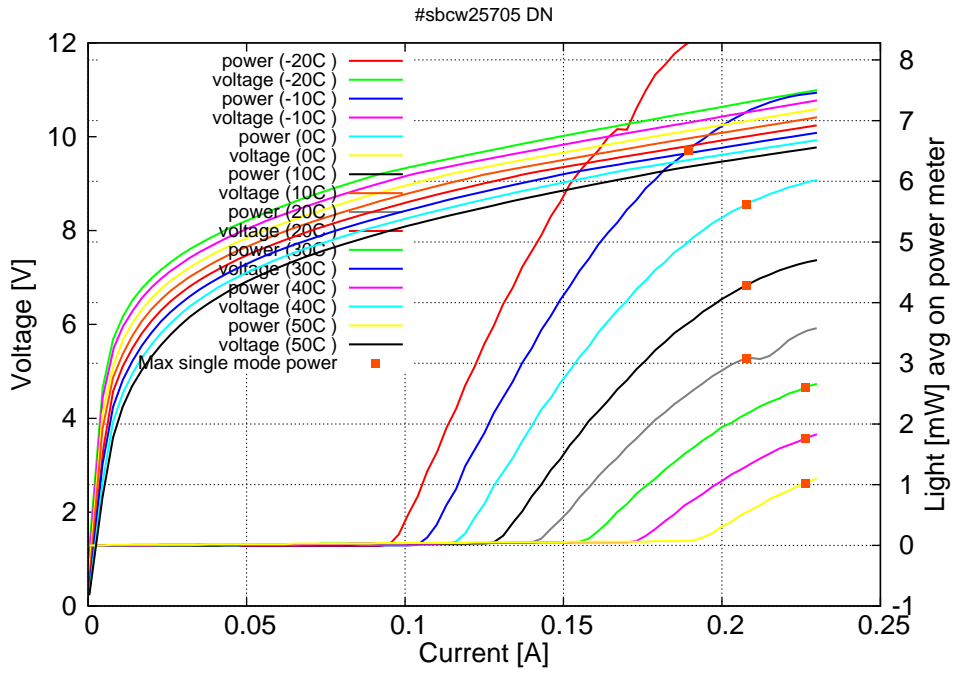


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=9.3V$ (2-wires measurements). Maximum operation current: 0.19A between -20C and -10C, 0.21A between 0C and 20C, 0.23A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

