

Datasheet for #sbcw25704 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.

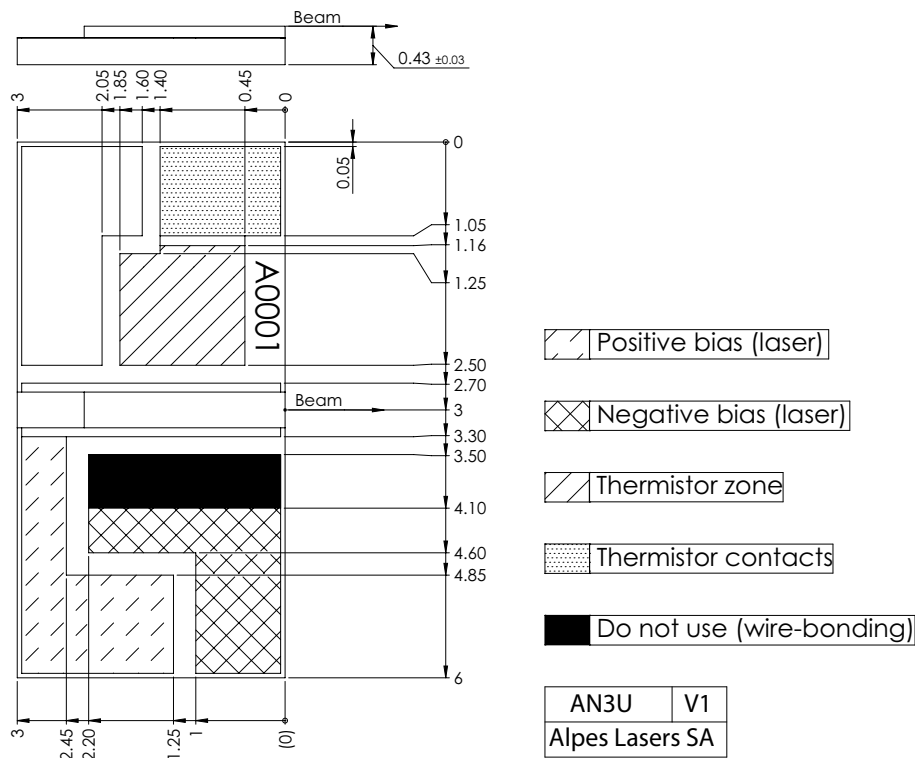


Figure 1: Mechanical and electrical interface for #sbcw25704 DN (please note that AlN submount numbering is A0X3M)

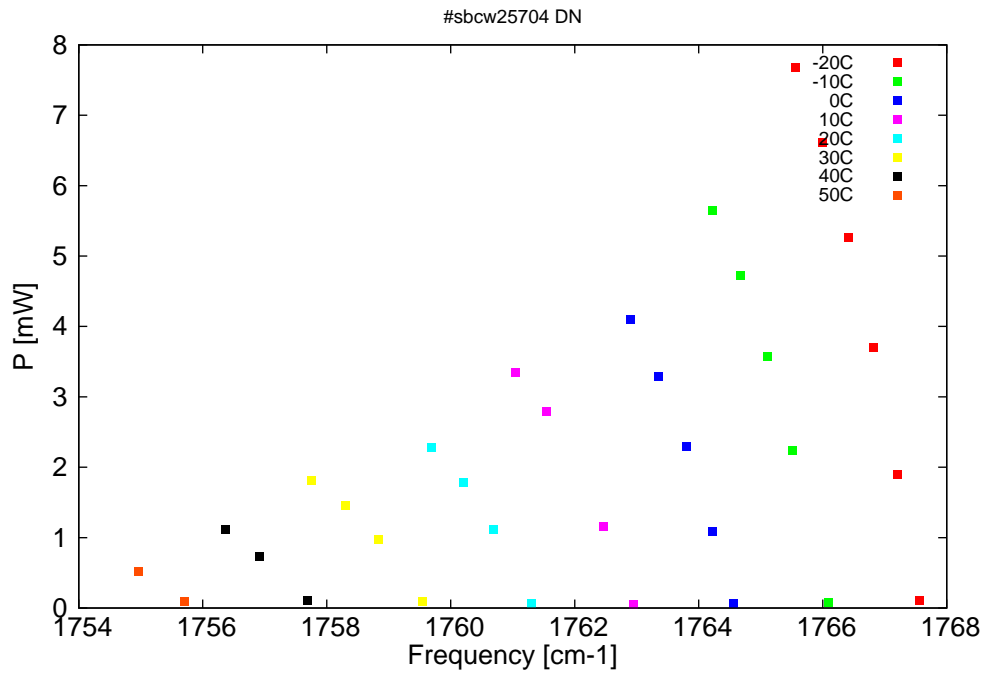


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

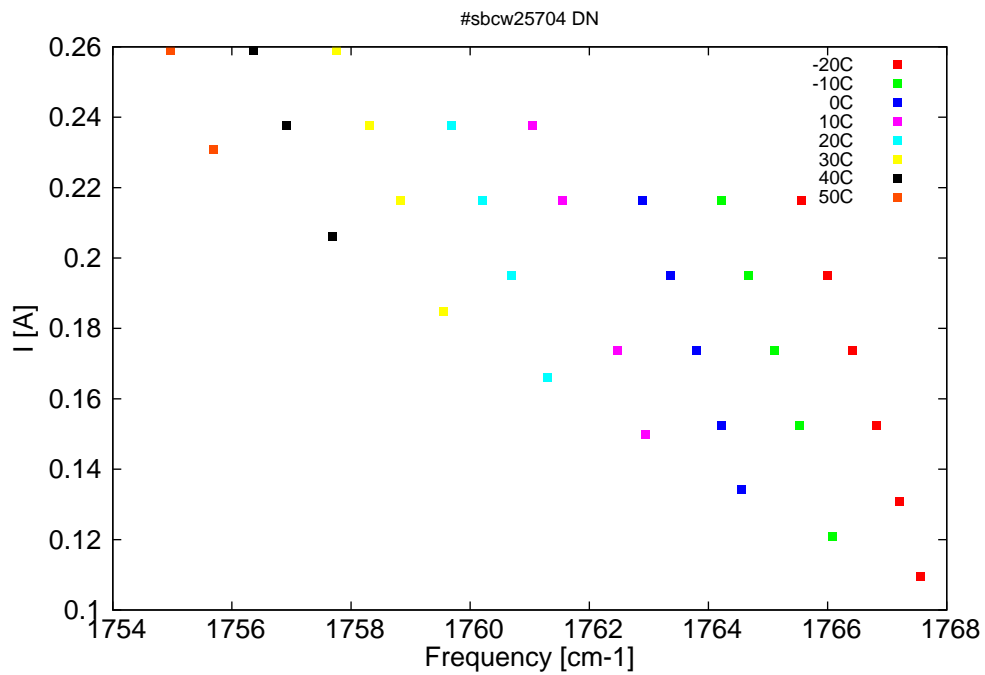


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5657.5	1767.6	0.1	-20	8.83	0.11
5658.7	1767.2	1.9	-20	9.07	0.131
5659.9	1766.8	3.7	-20	9.3	0.152
5661.2	1766.4	5.3	-20	9.52	0.174
5662.5	1766	6.6	-20	9.73	0.195
5663.9	1765.6	7.7	-20	9.94	0.216
5662.2	1766.1	0.1	-10	8.81	0.121
5664.1	1765.5	2.2	-10	9.15	0.152
5665.4	1765.1	3.6	-10	9.37	0.174
5666.8	1764.7	4.7	-10	9.57	0.195
5668.2	1764.2	5.6	-10	9.78	0.216
5667.1	1764.6	0.1	0	8.82	0.134
5668.2	1764.2	1.1	0	9.01	0.152
5669.6	1763.8	2.3	0	9.22	0.174
5671	1763.4	3.3	0	9.43	0.195
5672.5	1762.9	4.1	0	9.63	0.216
5672.3	1762.9	0	10	8.86	0.15
5673.9	1762.5	1.2	10	9.09	0.174
5676.8	1761.5	2.8	10	9.5	0.216
5678.4	1761	3.3	10	9.69	0.238
5677.6	1761.3	0.1	20	8.9	0.166
5679.6	1760.7	1.1	20	9.17	0.195
5681.2	1760.2	1.8	20	9.37	0.216
5682.8	1759.7	2.3	20	9.57	0.238
5683.3	1759.5	0.1	30	8.96	0.185
5685.6	1758.8	1	30	9.26	0.216
5687.3	1758.3	1.4	30	9.45	0.238
5689.1	1757.8	1.8	30	9.63	0.259
5689.3	1757.7	0.1	40	9.05	0.206
5691.8	1756.9	0.7	40	9.33	0.238
5693.6	1756.4	1.1	40	9.52	0.259
5695.7	1755.7	0.1	50	9.15	0.231
5698.1	1755	0.5	50	9.4	0.259

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

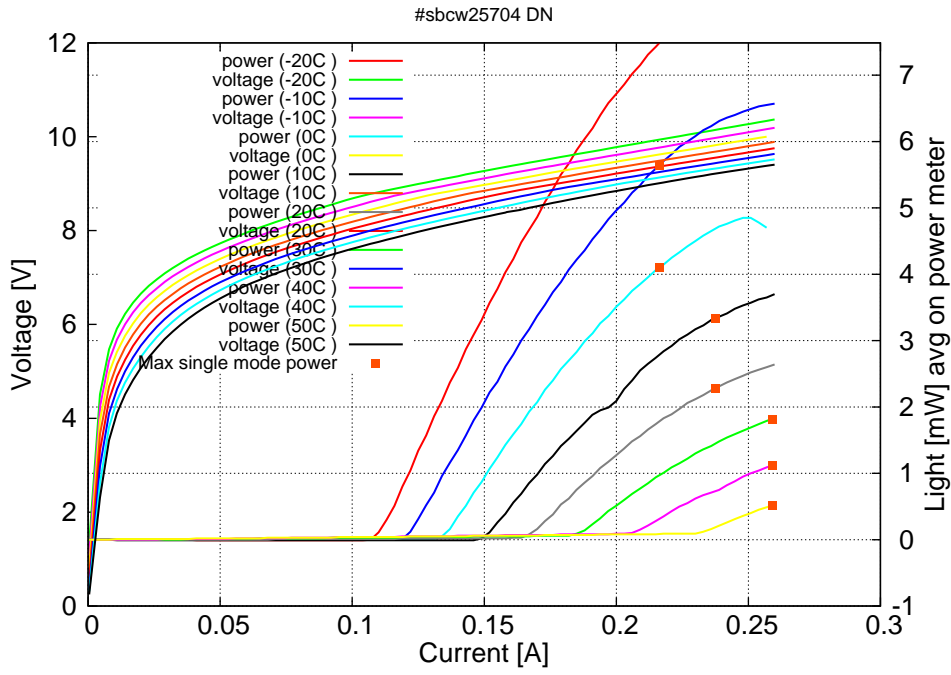


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.8V$ (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

