

Datasheet for #sbcw25710 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.

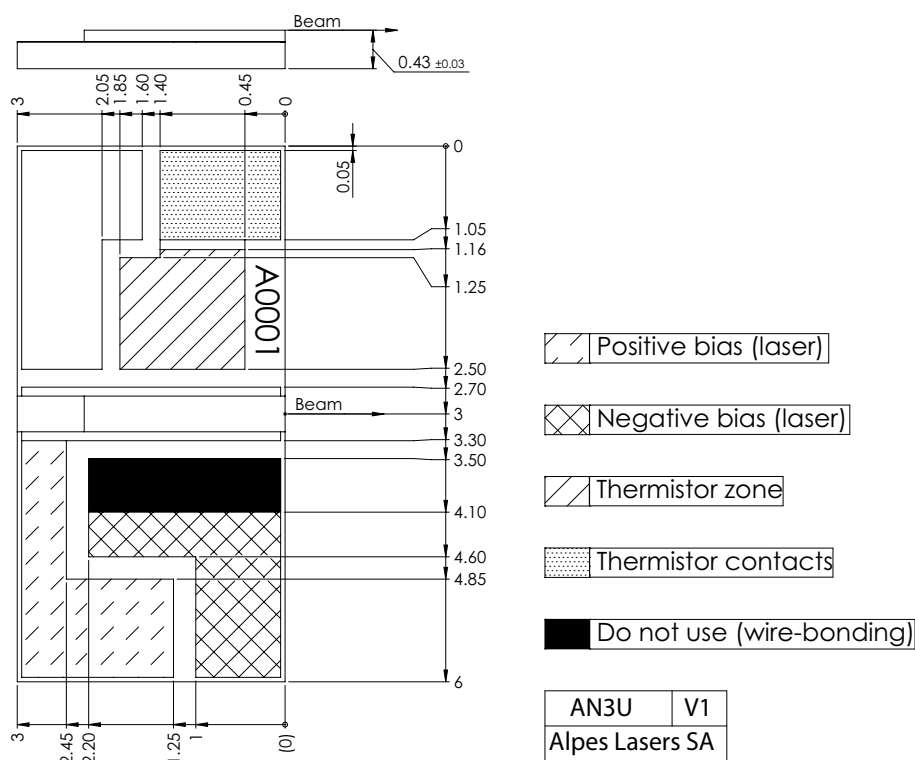


Figure 1: Mechanical and electrical interface for #sbcw25710 DN (please note that AlN submount numbering is A0X9Z)

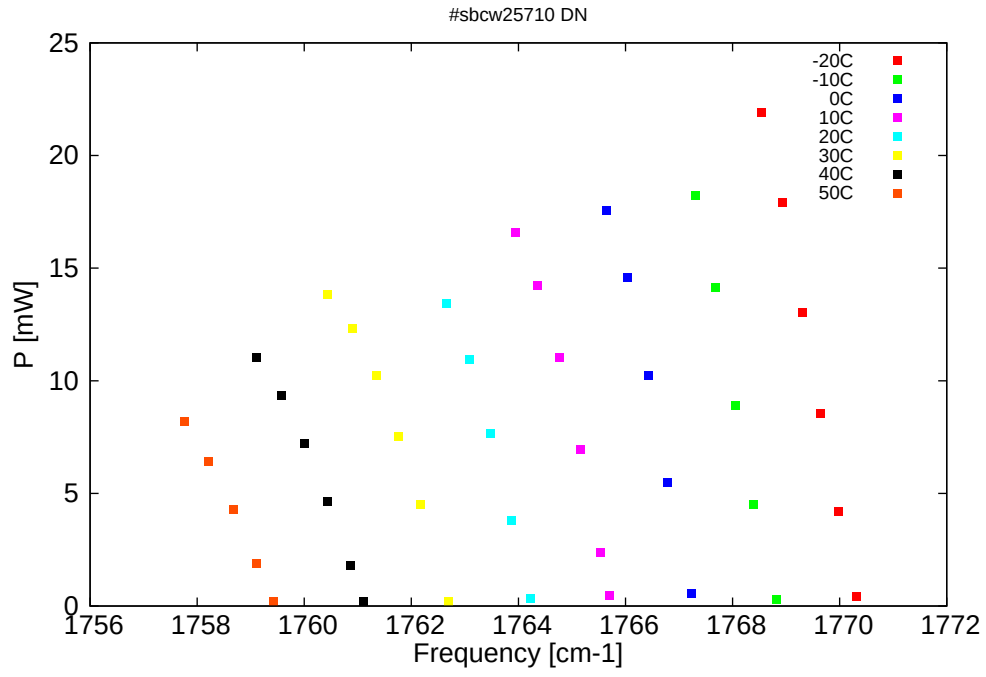


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

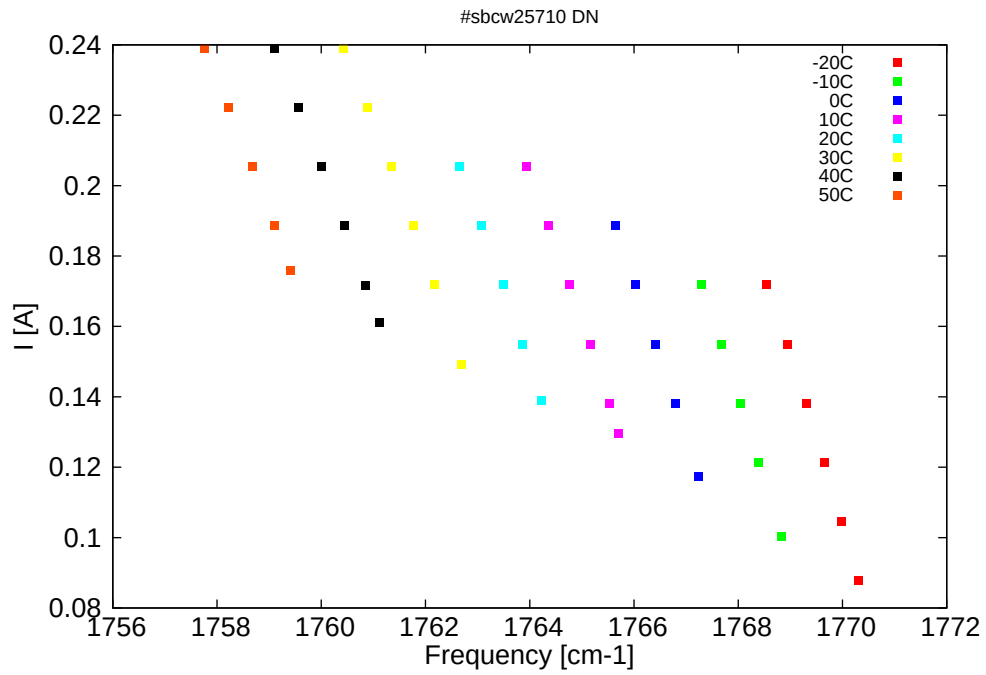


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5648.7	1770.3	0.4	-20	9.78	0.088
5649.8	1770	4.2	-20	10.11	0.105
5650.8	1769.6	8.5	-20	10.4	0.121
5651.9	1769.3	13	-20	10.67	0.138
5653.1	1768.9	17.9	-20	10.89	0.155
5654.4	1768.5	21.9	-20	11.08	0.172
5653.5	1768.8	0.3	-10	9.72	0.1
5654.8	1768.4	4.5	-10	10.09	0.121
5656	1768	8.9	-10	10.34	0.138
5657.1	1767.7	14.1	-10	10.56	0.155
5658.3	1767.3	18.2	-10	10.75	0.172
5658.6	1767.2	0.6	0	9.73	0.117
5660	1766.8	5.5	0	10.03	0.138
5661.2	1766.4	10.2	0	10.25	0.155
5662.4	1766	14.6	0	10.44	0.172
5663.7	1765.6	17.6	0	10.63	0.189
5663.5	1765.7	0.5	10	9.63	0.13
5664	1765.5	2.4	10	9.75	0.138
5665.2	1765.2	6.9	10	9.96	0.155
5666.5	1764.8	11	10	10.15	0.172
5667.8	1764.4	14.2	10	10.33	0.189
5669.1	1763.9	16.6	10	10.52	0.205
5668.2	1764.2	0.3	20	9.49	0.139
5669.4	1763.9	3.8	20	9.69	0.155
5670.6	1763.5	7.7	20	9.88	0.172
5671.9	1763.1	11	20	10.07	0.189
5673.3	1762.7	13.4	20	10.25	0.205
5673.2	1762.7	0.2	30	9.38	0.149
5674.8	1762.2	4.5	30	9.64	0.172
5676.1	1761.8	7.5	30	9.82	0.189
5677.5	1761.3	10.2	30	10	0.205
5678.9	1760.9	12.3	30	10.18	0.222
5680.4	1760.4	13.8	30	10.35	0.239
5678.2	1761.1	0.2	40	9.31	0.161
5679.1	1760.9	1.8	40	9.43	0.172
5680.4	1760.4	4.6	40	9.6	0.189
5681.8	1760	7.2	40	9.78	0.205
5683.2	1759.6	9.4	40	9.95	0.222
5684.7	1759.1	11	40	10.12	0.239
5683.7	1759.4	0.2	50	9.28	0.176
5684.7	1759.1	1.9	50	9.41	0.189
5686.1	1758.7	4.3	50	9.58	0.205
5687.6	1758.2	6.4	50	9.74	0.222
5689.1	1757.8	8.2	50	9.91	0.239

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

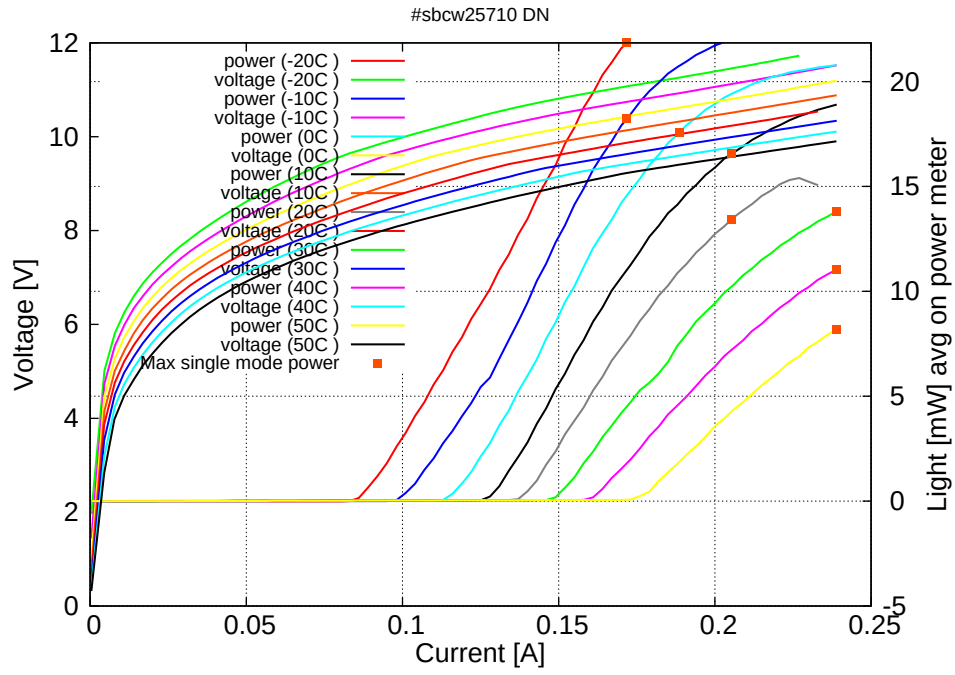


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=9.7V$ (2-wires measurements). Maximum operation current: 0.175A between -20C and -10C, 0.19A at 0C, 0.205A between 10C and 20C, 0.24A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

