

Datasheet for #sbcw25712 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 #sbcw25712 DN (please note that AlN submount numbering is A0X9T)

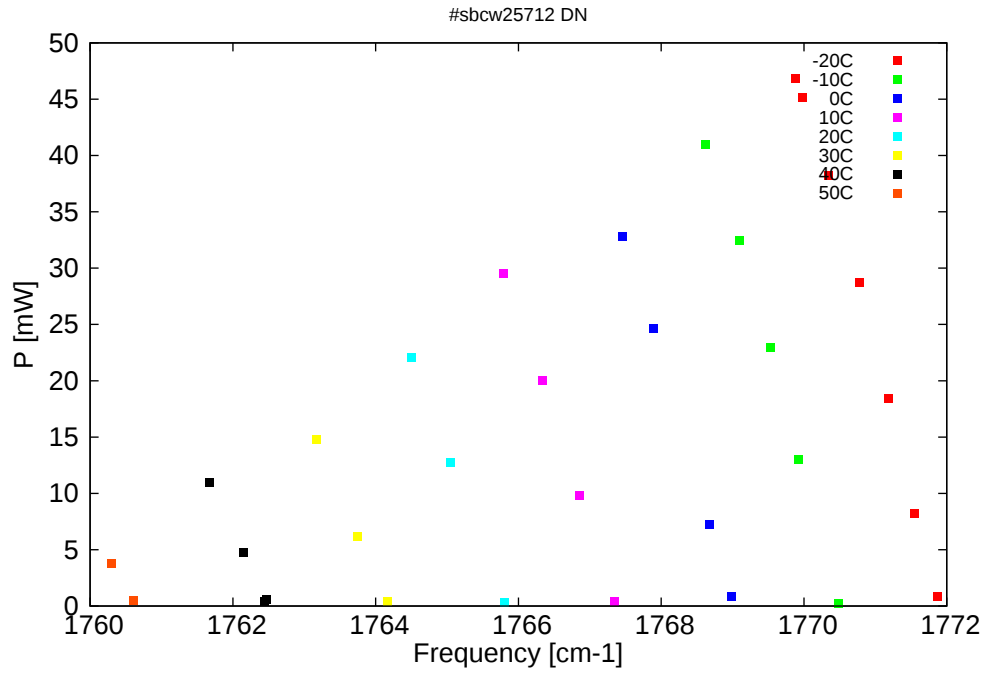


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

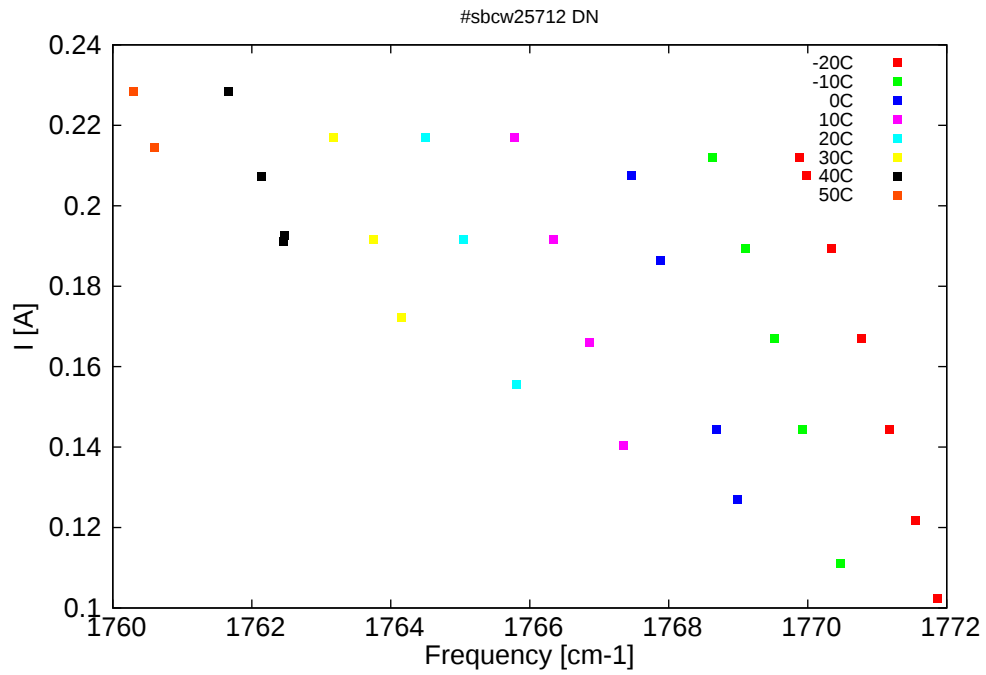


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5643.7	1771.9	0.9	-20	8.72	0.102
5644.8	1771.5	8.2	-20	8.94	0.122
5645.9	1771.2	18.4	-20	9.17	0.144
5647.2	1770.8	28.7	-20	9.4	0.167
5648.6	1770.3	38.2	-20	9.61	0.189
5649.8	1770	45.2	-20	9.78	0.207
5650.1	1769.9	46.8	-20	9.83	0.212
5648.2	1770.5	0.2	-10	8.68	0.111
5650	1769.9	13	-10	9.03	0.144
5651.2	1769.5	22.9	-10	9.26	0.167
5652.6	1769.1	32.4	-10	9.47	0.189
5654.1	1768.6	40.9	-10	9.68	0.212
5653	1769	0.9	0	8.73	0.127
5653.9	1768.7	7.2	0	8.9	0.144
5656.5	1767.9	24.6	0	9.31	0.186
5657.8	1767.5	32.8	0	9.5	0.207
5658.2	1767.4	0.4	10	8.91	0.14
5659.8	1766.9	9.8	10	9.19	0.166
5661.4	1766.3	20	10	9.45	0.192
5663.2	1765.8	29.5	10	9.71	0.217
5663.1	1765.8	0.3	20	8.96	0.156
5665.6	1765	12.8	20	9.33	0.192
5667.3	1764.5	22.1	20	9.58	0.217
5668.4	1764.2	0.4	30	9.01	0.172
5669.8	1763.7	6.2	30	9.21	0.192
5671.6	1763.2	14.8	30	9.46	0.217
5673.9	1762.4	0.4	40	9.07	0.191
5673.8	1762.5	0.6	40	8.91	0.193
5674.9	1762.1	4.7	40	9.04	0.207
5676.4	1761.7	11	40	9.22	0.228
5679.9	1760.6	0.5	50	8.99	0.215
5680.9	1760.3	3.8	50	9.11	0.228

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

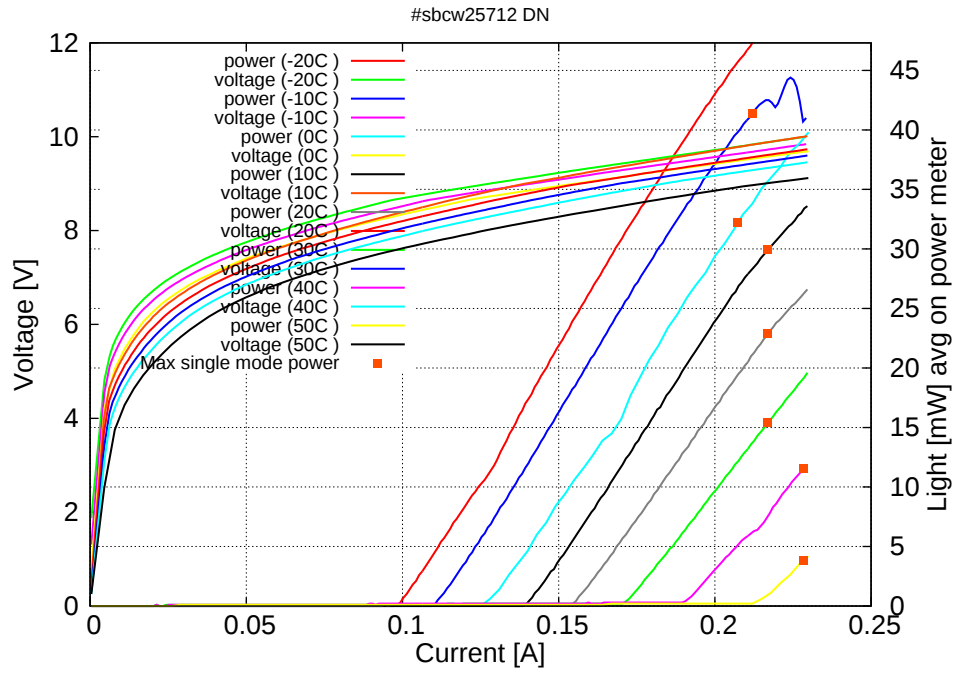


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.21A between -20C and 0C, 0.22A between 10C and 30C, 0.23A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

