

Datasheet for #sbcw25720 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 #sbcw25720 DN (please note that AlN submount numbering is A0X77)

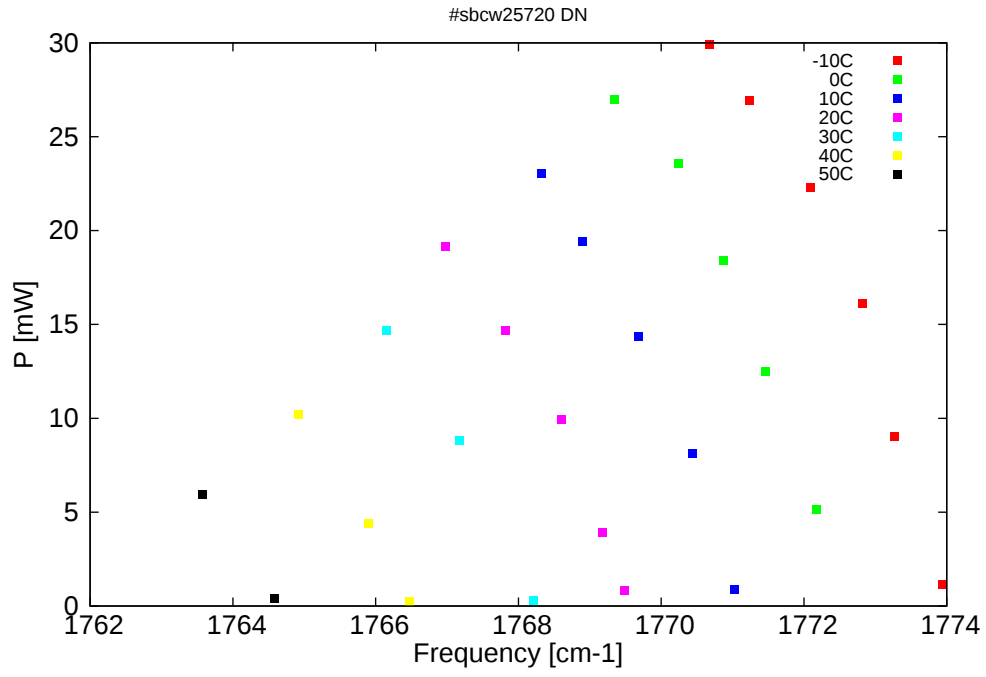


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

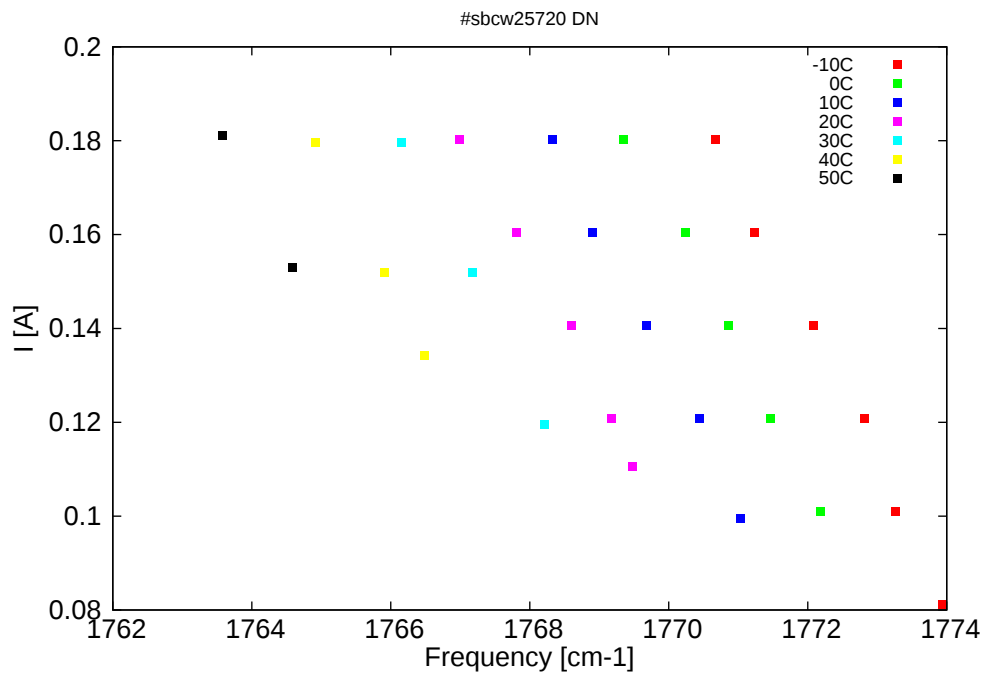


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5637.2	1773.9	1.1	-10	12.33	0.081
5639.3	1773.3	9	-10	12.95	0.101
5640.7	1772.8	16.1	-10	13.48	0.121
5643.1	1772.1	22.3	-10	13.94	0.141
5645.8	1771.2	26.9	-10	14.35	0.16
5647.6	1770.7	29.9	-10	14.71	0.18
5642.8	1772.2	5.2	0	12.41	0.101
5645	1771.5	12.5	0	12.93	0.121
5647	1770.9	18.4	0	13.38	0.141
5648.9	1770.2	23.6	0	13.78	0.16
5651.8	1769.3	27	0	14.14	0.18
5646.4	1771	0.9	10	11.88	0.1
5648.3	1770.4	8.1	10	12.43	0.121
5650.7	1769.7	14.4	10	12.87	0.141
5653.2	1768.9	19.4	10	13.26	0.16
5655.1	1768.3	23	10	13.61	0.18
5651.4	1769.5	0.8	20	11.72	0.111
5652.4	1769.2	3.9	20	11.95	0.121
5654.2	1768.6	9.9	20	12.39	0.141
5656.7	1767.8	14.7	20	12.77	0.16
5659.4	1767	19.1	20	13.12	0.18
5655.4	1768.2	0.3	30	11.34	0.12
5658.8	1767.2	8.8	30	11.97	0.152
5662	1766.2	14.7	30	12.44	0.18
5661	1766.5	0.3	40	11.26	0.134
5662.8	1765.9	4.4	40	11.58	0.152
5666	1764.9	10.2	40	12.04	0.18
5667.1	1764.6	0.4	50	11.25	0.153
5670.3	1763.6	5.9	50	11.7	0.181

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

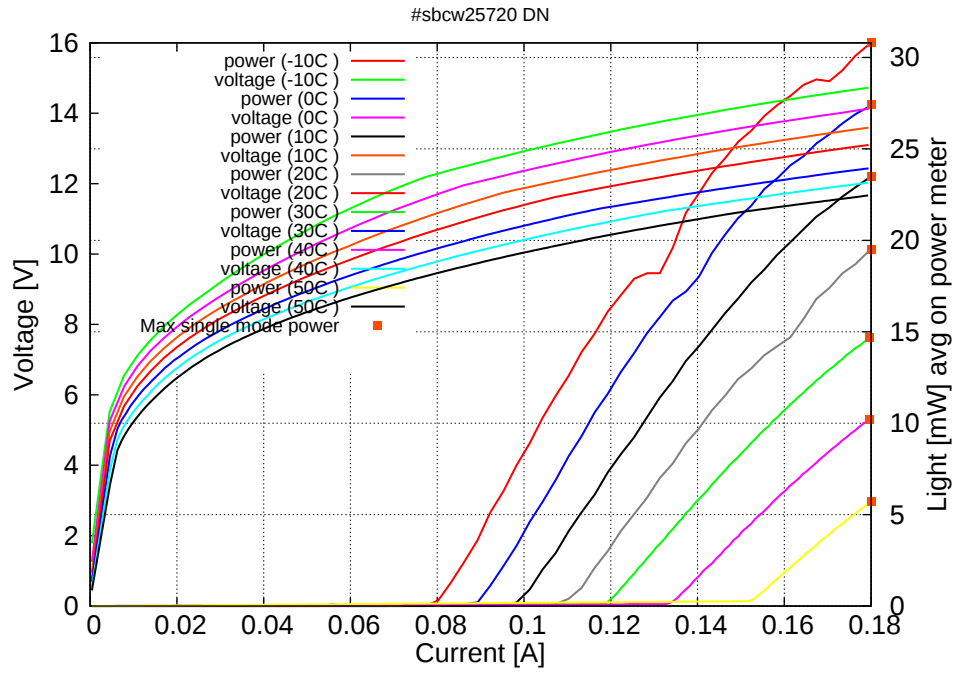


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.08A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.18A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

