

Datasheet for #sbcw25521 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

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 #sbcw25521 DN (please note that AlN submount numbering is A0U02)

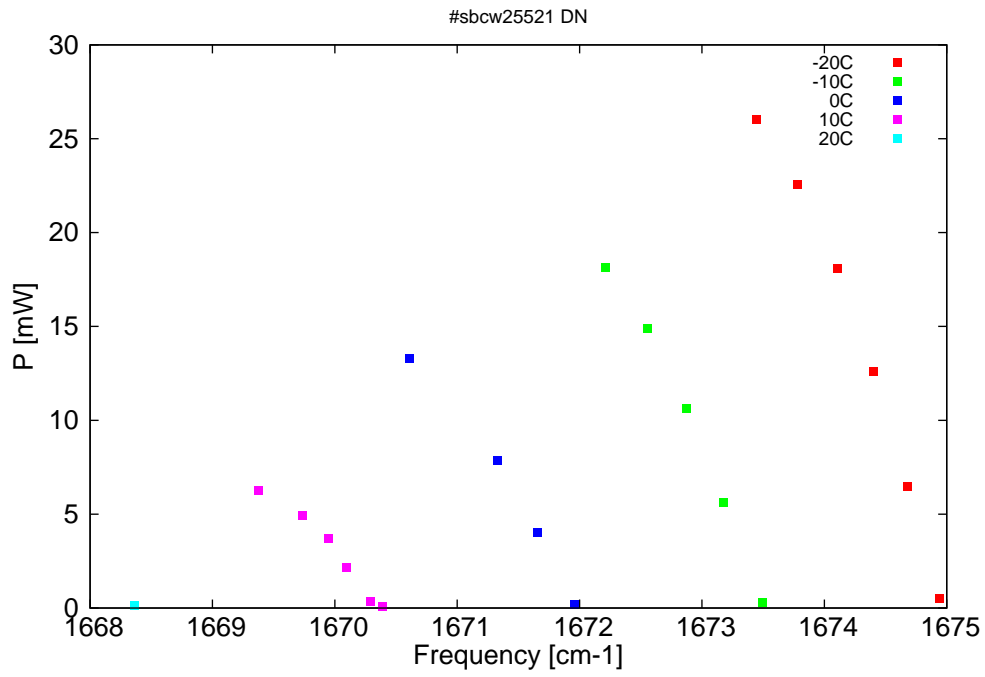


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

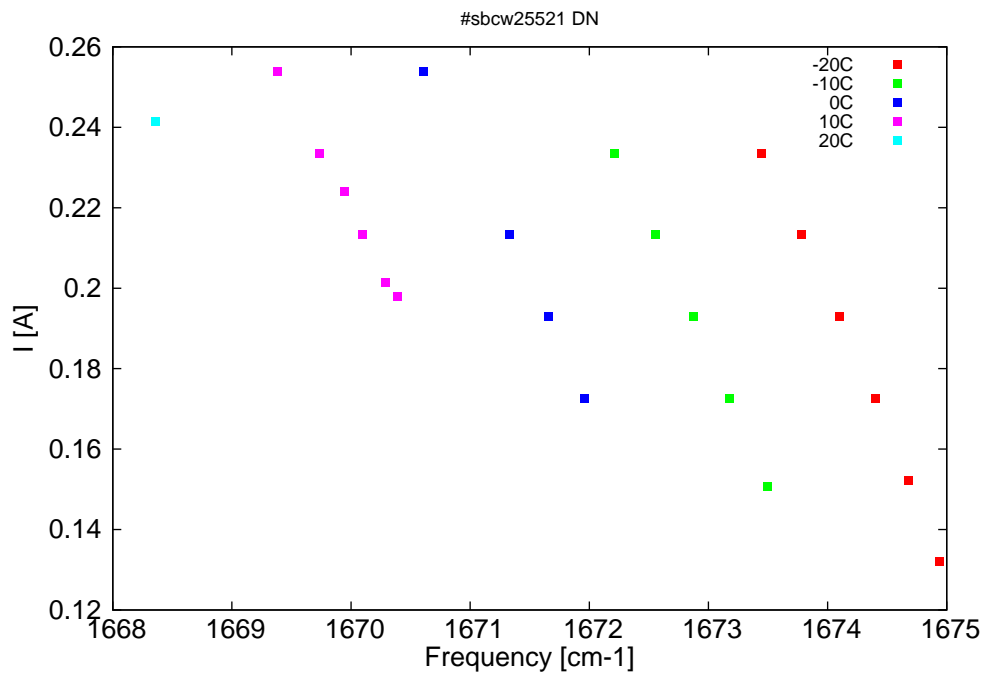


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5970.4	1674.9	0.5	-20	10.83	0.132
5971.3	1674.7	6.5	-20	11.24	0.152
5972.3	1674.4	12.6	-20	11.62	0.173
5973.3	1674.1	18.1	-20	11.98	0.193
5974.5	1673.8	22.6	-20	12.33	0.213
5975.7	1673.4	26	-20	12.68	0.234
5975.5	1673.5	0.3	-10	11.01	0.151
5976.6	1673.2	5.6	-10	11.42	0.173
5977.7	1672.9	10.6	-10	11.8	0.193
5978.9	1672.6	14.9	-10	12.18	0.213
5980.1	1672.2	18.1	-10	12.56	0.234
5981	1672	0.2	0	11.04	0.173
5982.1	1671.7	4.1	0	11.38	0.193
5983.3	1671.3	7.9	0	11.71	0.213
5985.8	1670.6	13.3	0	12.4	0.254
5986.6	1670.4	0.1	10	11.37	0.198
5987	1670.3	0.4	10	11.4	0.201
5987.7	1670.1	2.2	10	11.59	0.213
5988.2	1669.9	3.7	10	11.8	0.224
5989	1669.7	4.9	10	11.92	0.234
5990.2	1669.4	6.3	10	12.25	0.254
5993.9	1668.4	0.1	20	11.93	0.242

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

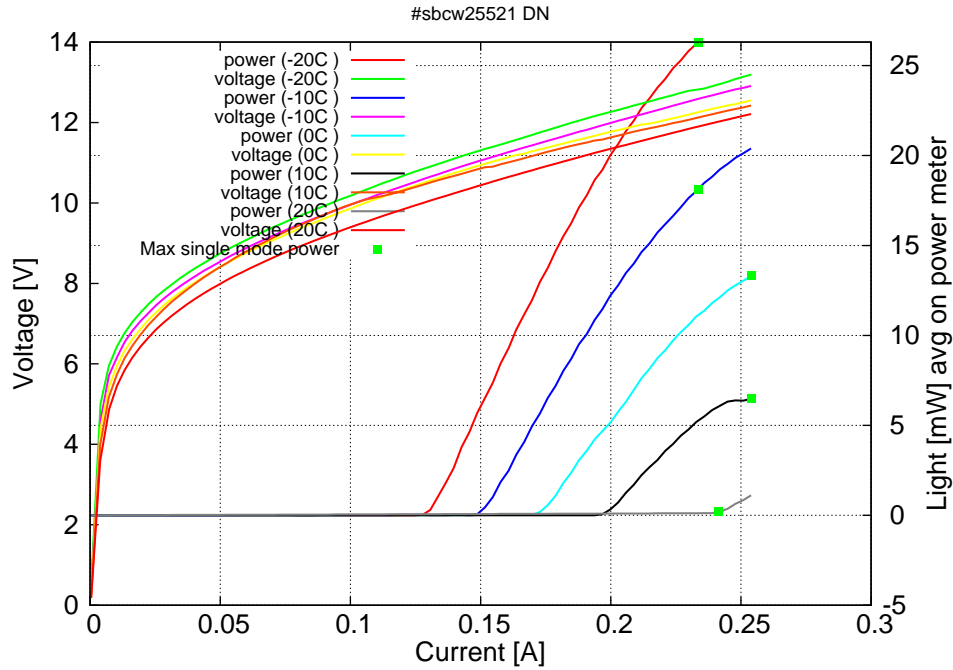


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=10.9V$ (2-wires measurements). Maximum operation current: 0.235A between -20C and -10C, 0.255A between 0C and 20C.

Figure 3: spectra at different temperatures for various DC currents

