

Datasheet for #sbcw24422 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 #sbcw24422 DN (please note that AlN submount numbering is A0ZC0)

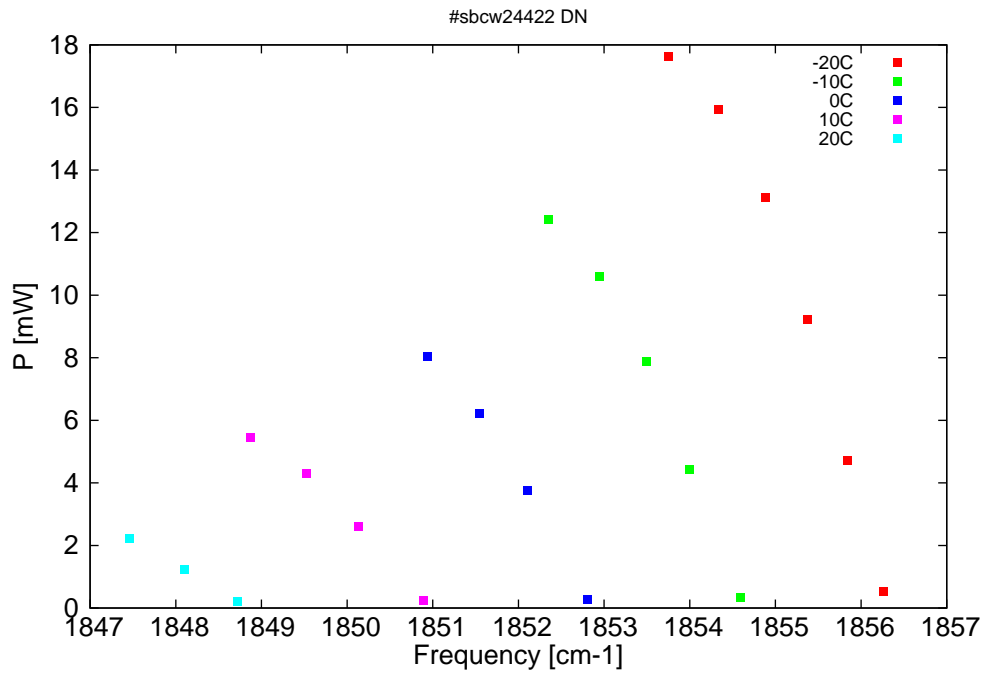


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

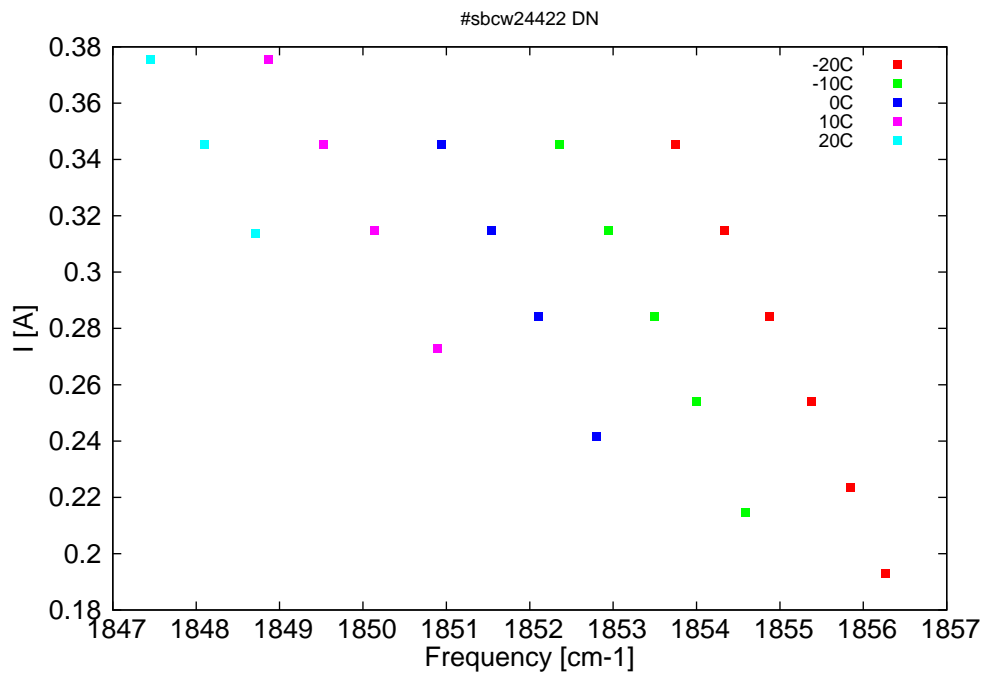


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5387.2	1856.3	0.5	-20	8.94	0.193
5388.4	1855.8	4.7	-20	9.19	0.223
5389.7	1855.4	9.2	-20	9.47	0.254
5391.2	1854.9	13.1	-20	9.74	0.284
5392.8	1854.3	15.9	-20	10.02	0.315
5394.5	1853.8	17.6	-20	10.31	0.345
5392	1854.6	0.3	-10	9.06	0.215
5393.7	1854	4.4	-10	9.39	0.254
5395.2	1853.5	7.9	-10	9.66	0.284
5396.8	1852.9	10.6	-10	9.94	0.315
5398.5	1852.4	12.4	-10	10.23	0.345
5397.2	1852.8	0.3	0	9.22	0.242
5399.3	1852.1	3.7	0	9.58	0.284
5400.9	1851.5	6.2	0	9.86	0.315
5402.7	1850.9	8	0	10.14	0.345
5402.8	1850.9	0.2	10	9.42	0.273
5405	1850.1	2.6	10	9.77	0.315
5406.8	1849.5	4.3	10	10.05	0.345
5408.7	1848.9	5.4	10	10.33	0.376
5409.2	1848.7	0.2	20	9.71	0.314
5411	1848.1	1.2	20	9.97	0.345
5412.8	1847.5	2.2	20	10.24	0.376

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

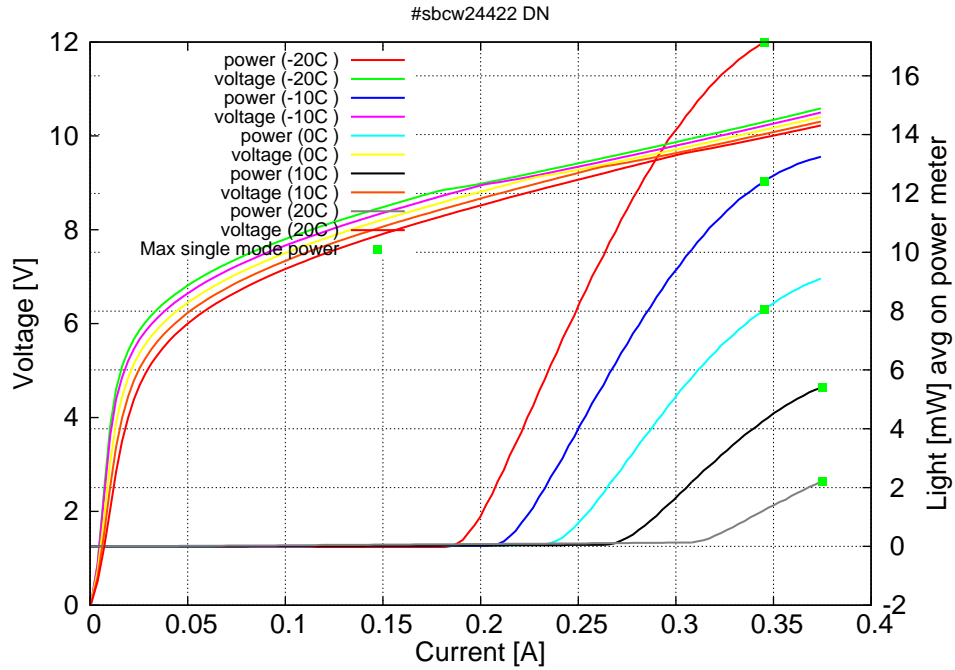


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.345A between -20C and 0C, 0.375A between 10C and 20C.

Figure 3: spectra at different temperatures for various DC currents

