

Datasheet for #sbcw22423 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 #sbcw22423 DN (please note that AlN submount numbering is A0YJH)

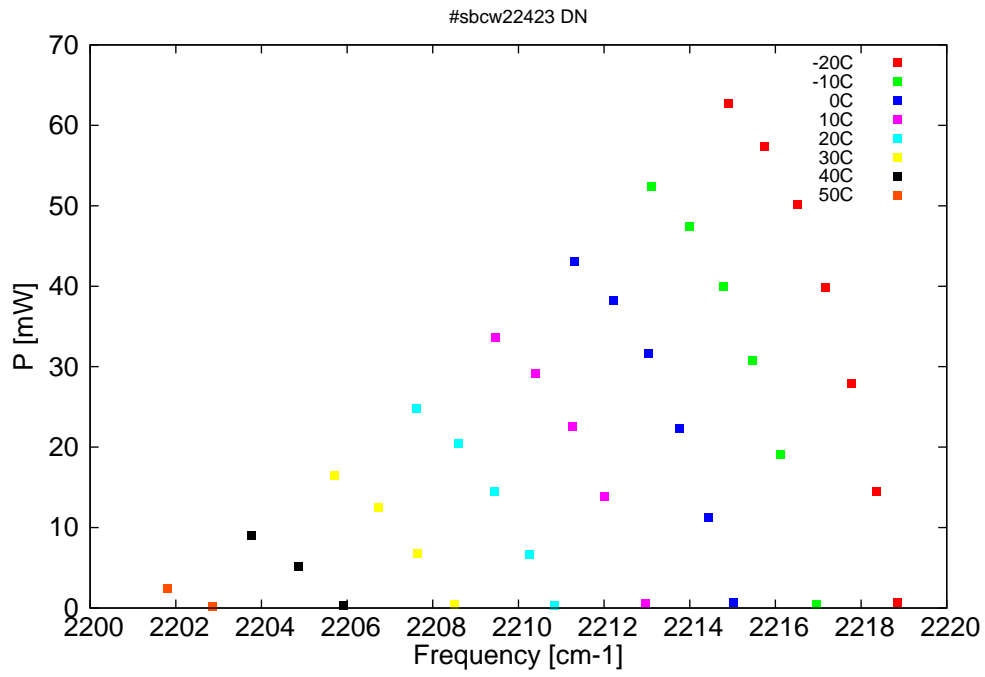


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

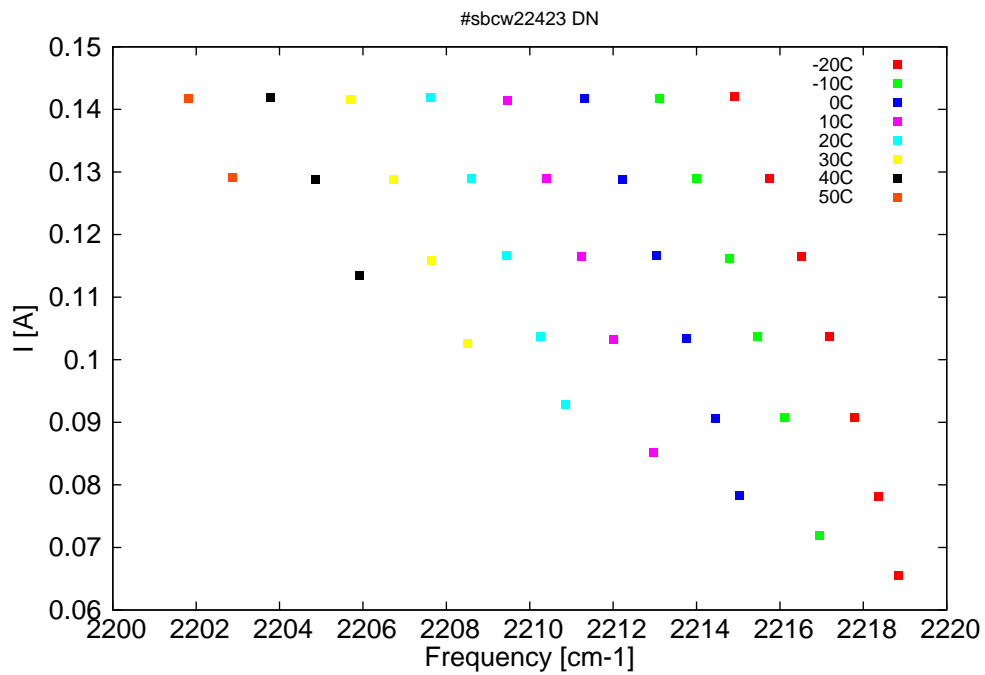


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4506.8	2218.8	0.7	-20	8.76	0.066
4507.8	2218.4	14.5	-20	9	0.078
4509	2217.8	27.9	-20	9.24	0.091
4510.2	2217.2	39.9	-20	9.48	0.104
4511.6	2216.5	50.2	-20	9.72	0.117
4513.1	2215.8	57.4	-20	9.97	0.129
4514.9	2214.9	62.7	-20	10.24	0.142
4510.7	2217	0.5	-10	8.84	0.072
4512.4	2216.1	19.1	-10	9.2	0.091
4513.7	2215.5	30.8	-10	9.45	0.104
4515.1	2214.8	40	-10	9.69	0.116
4516.7	2214	47.4	-10	9.94	0.129
4518.5	2213.1	52.4	-10	10.22	0.142
4514.6	2215	0.7	0	8.94	0.078
4515.8	2214.4	11.3	0	9.17	0.091
4517.2	2213.8	22.3	0	9.42	0.103
4518.7	2213	31.6	0	9.67	0.117
4520.3	2212.2	38.2	0	9.93	0.129
4522.2	2211.3	43	0	10.2	0.142
4518.8	2213	0.5	10	9.05	0.085
4520.8	2212	13.8	10	9.4	0.103
4522.3	2211.3	22.6	10	9.65	0.116
4524.1	2210.4	29.1	10	9.91	0.129
4526	2209.5	33.6	10	10.18	0.141
4523.2	2210.8	0.3	20	9.18	0.093
4524.4	2210.3	6.7	20	9.38	0.104
4526	2209.5	14.5	20	9.64	0.117
4527.7	2208.6	20.4	20	9.89	0.129
4529.8	2207.6	24.8	20	10.17	0.142
4528	2208.5	0.5	30	9.37	0.103
4529.7	2207.6	6.8	30	9.62	0.116
4531.6	2206.7	12.5	30	9.88	0.129
4533.7	2205.7	16.5	30	10.16	0.142
4533.3	2205.9	0.3	40	9.59	0.114
4535.4	2204.9	5.2	40	9.88	0.129
4537.7	2203.8	9	40	10.16	0.142
4539.5	2202.9	0.2	50	9.92	0.129
4541.7	2201.8	2.4	50	10.18	0.142

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

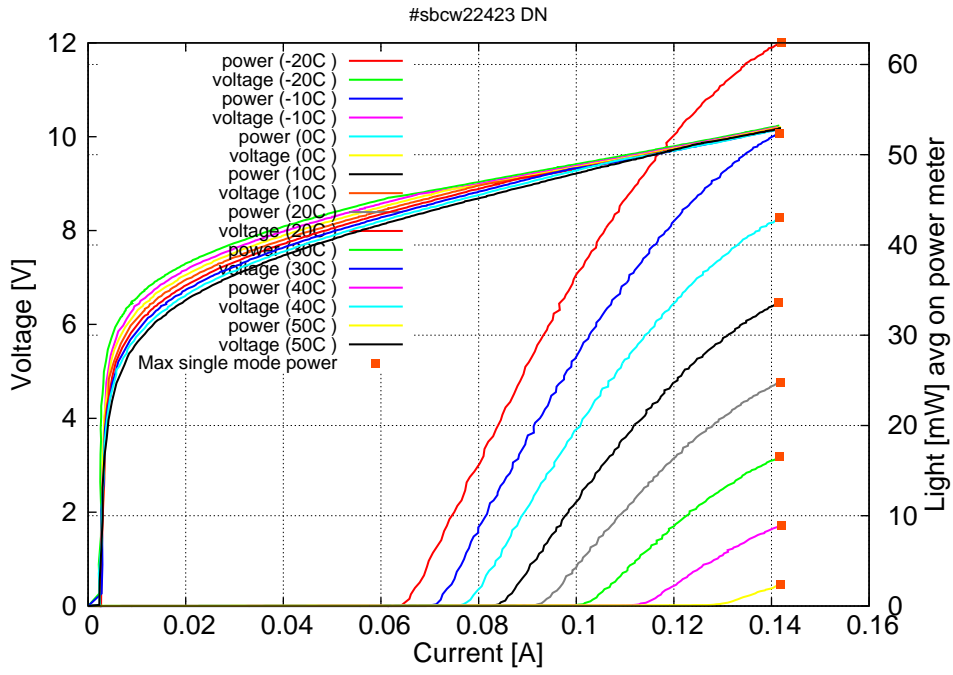


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.142A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

