

Datasheet for #sbcw22413 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 #sbcw22413 DN (please note that AlN submount numbering is A0YJ7)

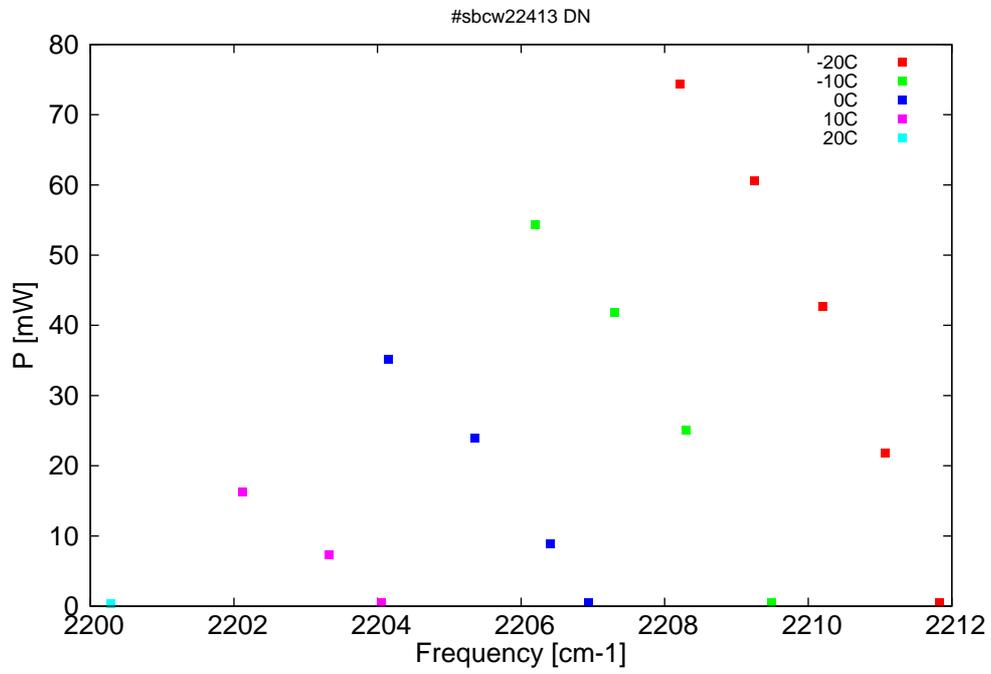


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

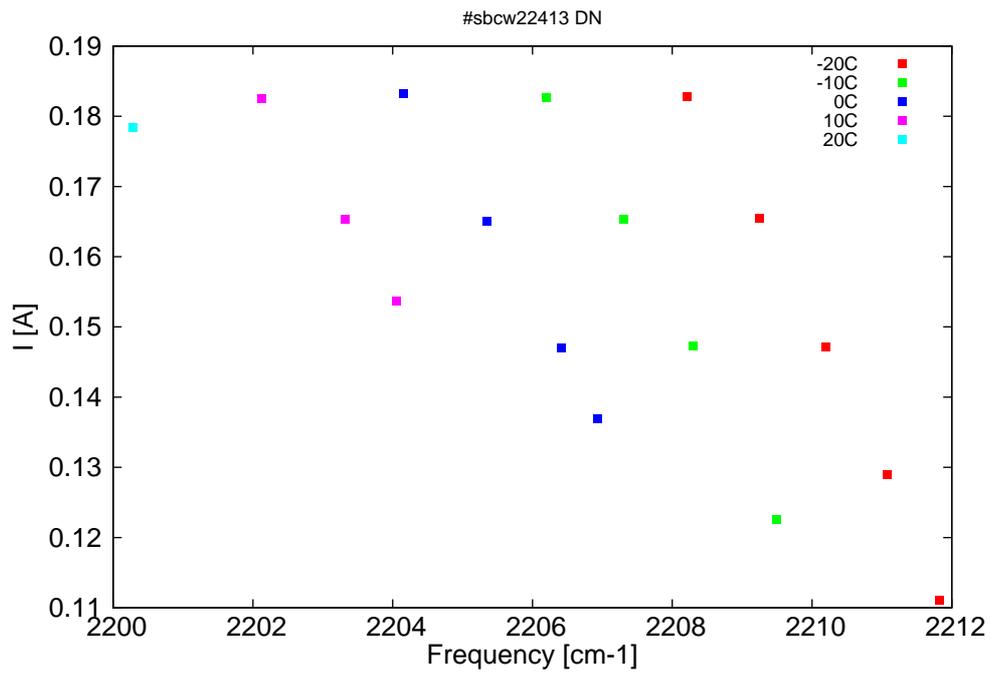


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4521.2	2211.8	0.5	-20	8.96	0.111
4522.7	2211.1	21.8	-20	9.19	0.129
4524.5	2210.2	42.7	-20	9.43	0.147
4526.4	2209.3	60.5	-20	9.67	0.165
4528.6	2208.2	74.4	-20	9.91	0.183
4525.9	2209.5	0.5	-10	9.1	0.123
4528.4	2208.3	25.1	-10	9.41	0.147
4530.4	2207.3	41.8	-10	9.65	0.165
4532.7	2206.2	54.3	-10	9.9	0.183
4531.2	2206.9	0.5	0	9.27	0.137
4532.3	2206.4	8.8	0	9.4	0.147
4534.4	2205.4	23.9	0	9.64	0.165
4536.9	2204.2	35.1	0	9.9	0.183
4537.1	2204.1	0.5	10	9.49	0.154
4538.6	2203.3	7.4	10	9.64	0.165
4541.1	2202.1	16.3	10	9.89	0.183
4544.9	2200.3	0.3	20	9.85	0.178

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

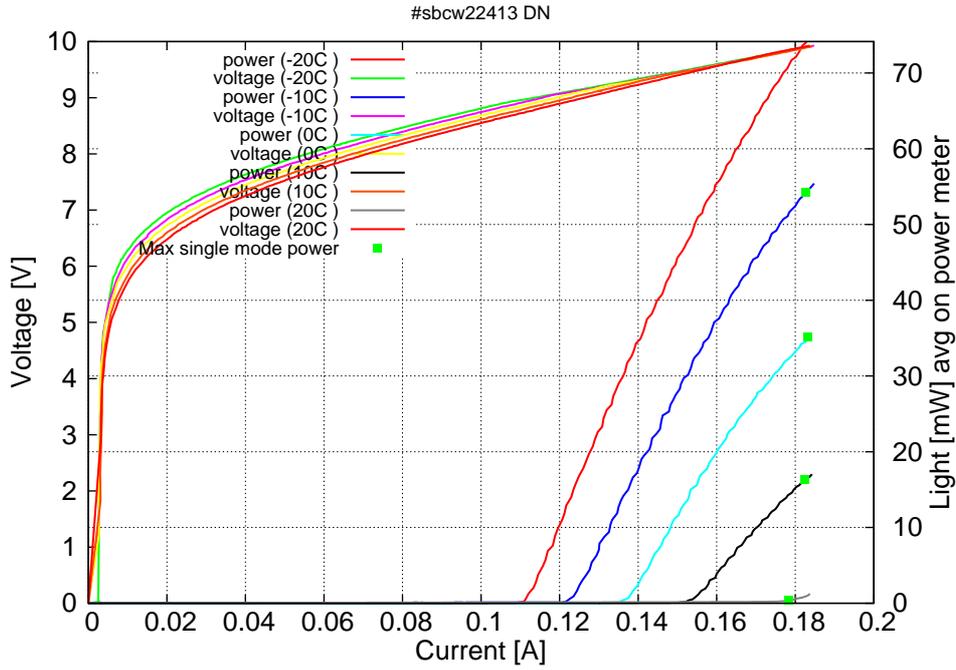


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.95V$ (2-wires measurements). Maximum operation current: 0.185A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

