

Datasheet for #sbcw24283 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 #sbcw24283 DN (please note that AlN submount numbering is A0V7Z)

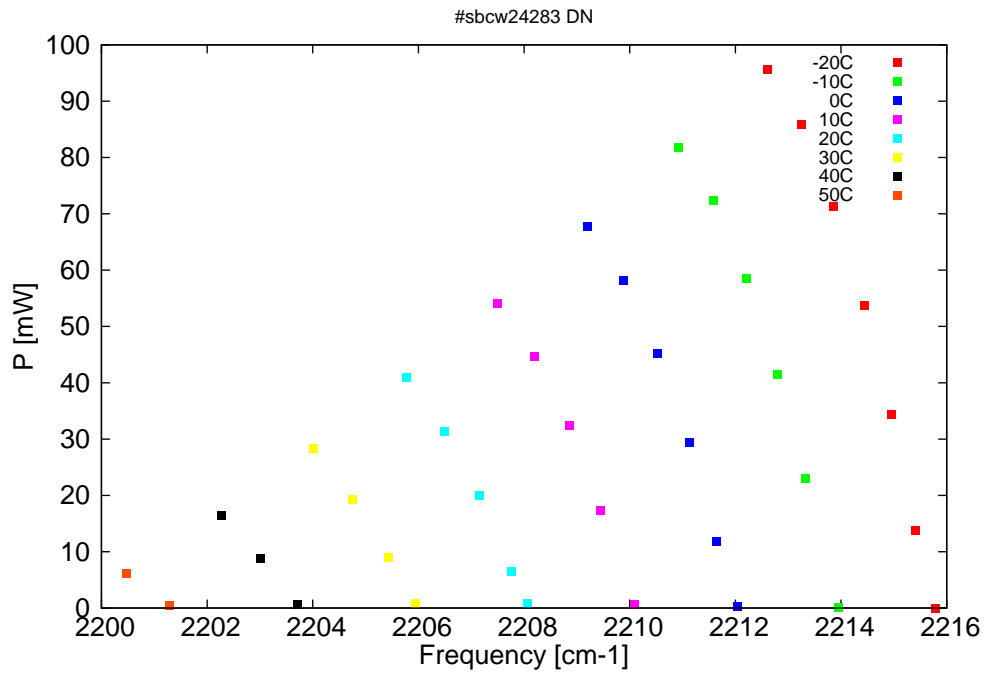


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

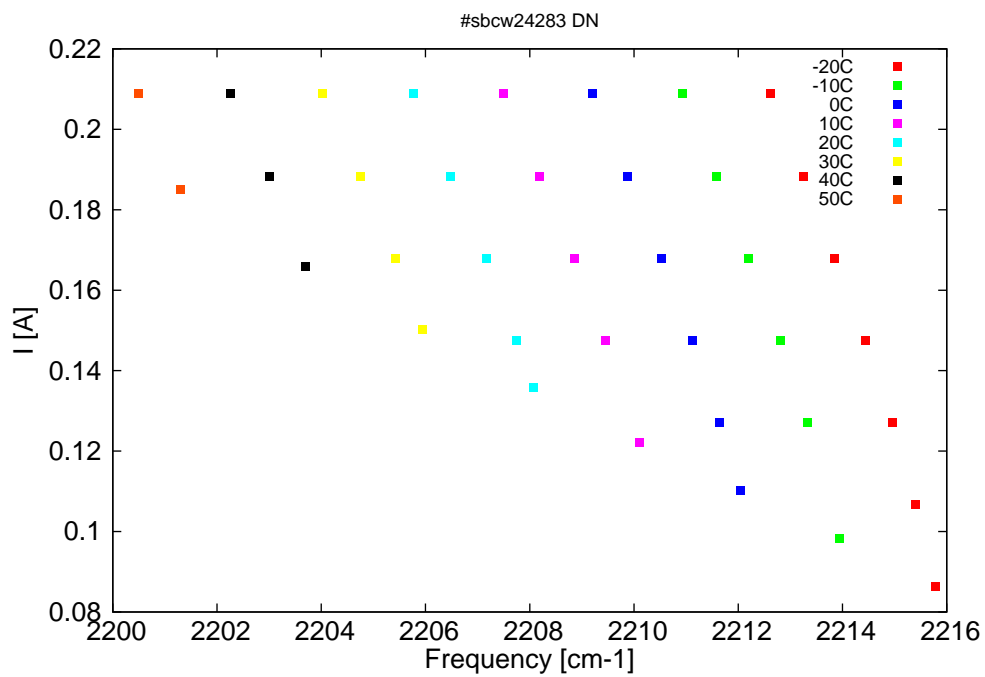


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4513.1	2215.8	0	-20	11.26	0.086
4513.8	2215.4	13.7	-20	11.44	0.107
4514.8	2215	34.4	-20	11.64	0.127
4515.8	2214.4	53.8	-20	11.86	0.148
4517	2213.9	71.2	-20	12.07	0.168
4518.2	2213.3	85.8	-20	12.3	0.188
4519.5	2212.6	95.6	-20	12.53	0.209
4516.8	2213.9	0.2	-10	11.32	0.098
4518.1	2213.3	23	-10	11.59	0.127
4519.2	2212.8	41.4	-10	11.81	0.148
4520.4	2212.2	58.5	-10	12.02	0.168
4521.7	2211.6	72.4	-10	12.25	0.188
4523	2210.9	81.8	-10	12.48	0.209
4520.7	2212	0.3	0	11.4	0.11
4521.5	2211.6	11.8	0	11.55	0.127
4522.6	2211.1	29.4	0	11.76	0.148
4523.8	2210.5	45.1	0	11.98	0.168
4525.1	2209.9	58.2	0	12.2	0.188
4526.5	2209.2	67.8	0	12.43	0.209
4524.7	2210.1	0.6	10	11.48	0.122
4526	2209.5	17.4	10	11.72	0.148
4527.2	2208.9	32.4	10	11.93	0.168
4528.6	2208.2	44.7	10	12.15	0.188
4530	2207.5	54	10	12.39	0.209
4528.9	2208.1	0.8	20	11.59	0.136
4529.5	2207.8	6.5	20	11.7	0.148
4530.7	2207.2	19.9	20	11.9	0.168
4532.1	2206.5	31.4	20	12.12	0.188
4533.6	2205.8	40.9	20	12.35	0.209
4533.2	2205.9	0.8	30	11.71	0.15
4534.3	2205.4	8.9	30	11.87	0.168
4535.6	2204.8	19.3	30	12.08	0.188
4537.2	2204	28.3	30	12.3	0.209
4537.8	2203.7	0.7	40	11.85	0.166
4539.2	2203	8.8	40	12.05	0.188
4540.8	2202.3	16.4	40	12.26	0.209
4542.8	2201.3	0.4	50	12.02	0.185
4544.5	2200.5	6.1	50	12.24	0.209

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

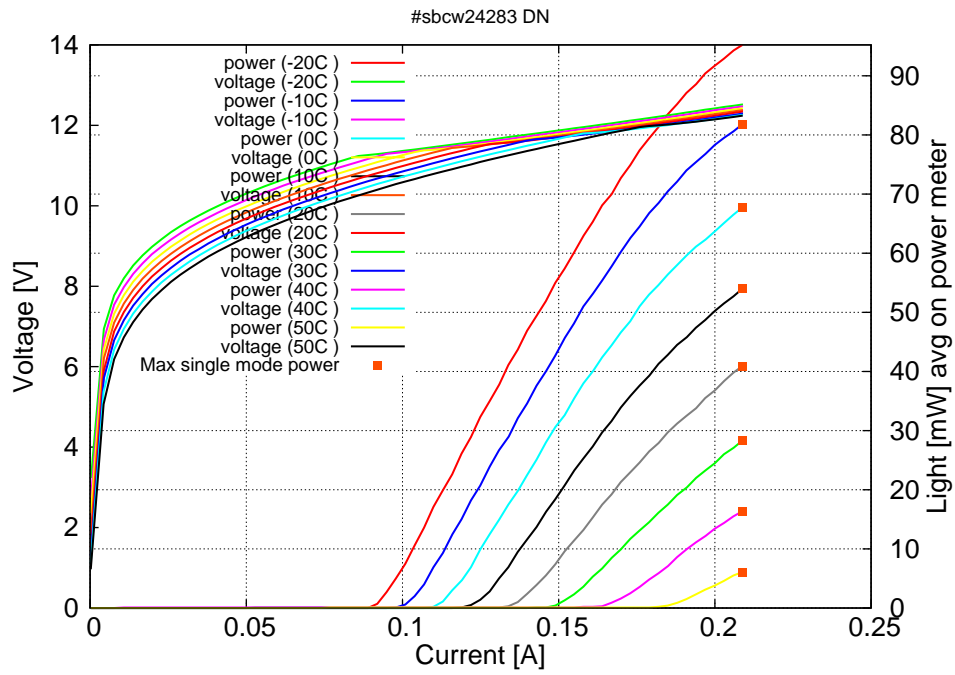


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=11.3V$ (2-wires measurements). Maximum operation current: 0.21A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

