

Datasheet for #sbcw22417 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 #sbcw22417 DN (please note that AlN submount numbering is A0YFX)

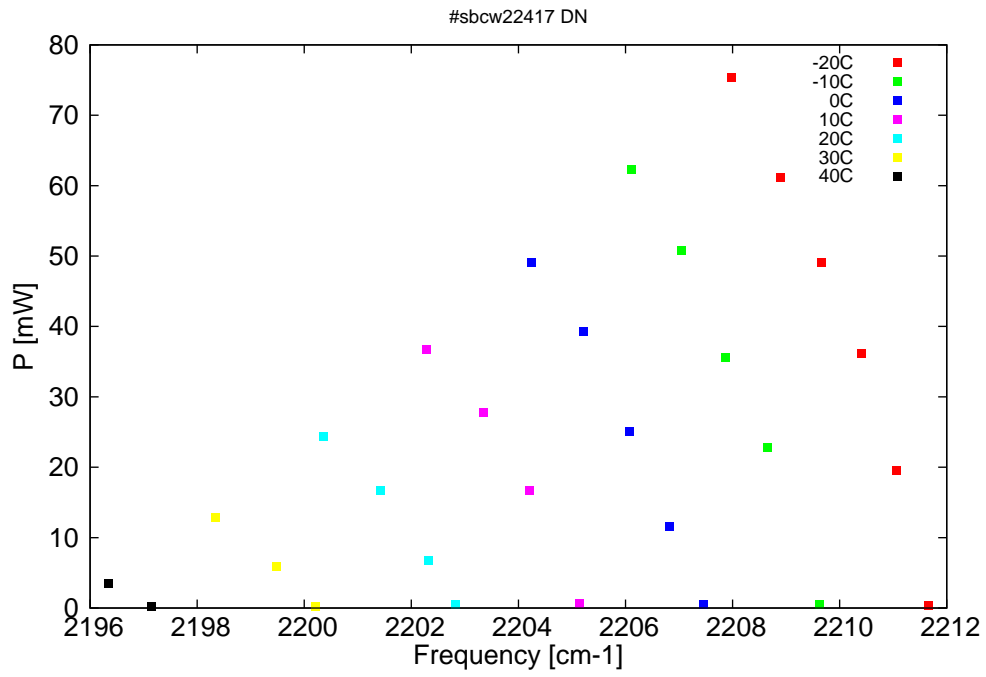


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

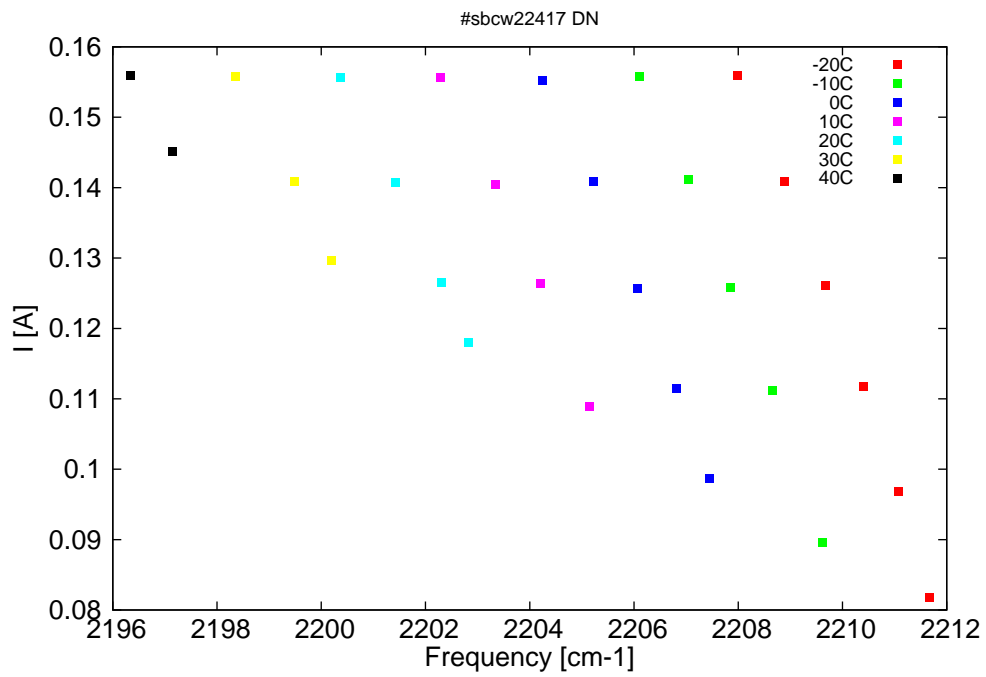


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4521.5	2211.7	0.4	-20	8.81	0.082
4522.7	2211.1	19.5	-20	9.05	0.097
4524.1	2210.4	36.2	-20	9.28	0.112
4525.6	2209.7	49.1	-20	9.51	0.126
4527.2	2208.9	61.1	-20	9.75	0.141
4529	2208	75.3	-20	9.99	0.156
4525.7	2209.6	0.5	-10	8.9	0.09
4527.7	2208.6	22.7	-10	9.24	0.111
4529.3	2207.9	35.6	-10	9.48	0.126
4530.9	2207	50.9	-10	9.72	0.141
4532.9	2206.1	62.3	-10	9.97	0.156
4530.1	2207.5	0.5	0	9.03	0.099
4531.4	2206.8	11.6	0	9.23	0.111
4533	2206.1	25.1	0	9.45	0.126
4534.7	2205.2	39.2	0	9.69	0.141
4536.7	2204.2	49.1	0	9.94	0.155
4534.9	2205.1	0.6	10	9.17	0.109
4536.8	2204.2	16.6	10	9.44	0.126
4538.5	2203.3	27.7	10	9.67	0.14
4540.7	2202.3	36.8	10	9.93	0.156
4539.6	2202.8	0.5	20	9.3	0.118
4540.7	2202.3	6.8	20	9.43	0.127
4542.5	2201.4	16.7	20	9.67	0.141
4544.7	2200.4	24.4	20	9.92	0.156
4545	2200.2	0.3	30	9.49	0.13
4546.5	2199.5	5.9	30	9.66	0.141
4548.9	2198.3	12.8	30	9.93	0.156
4551.4	2197.1	0.3	40	9.76	0.145
4553	2196.3	3.5	40	9.94	0.156

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

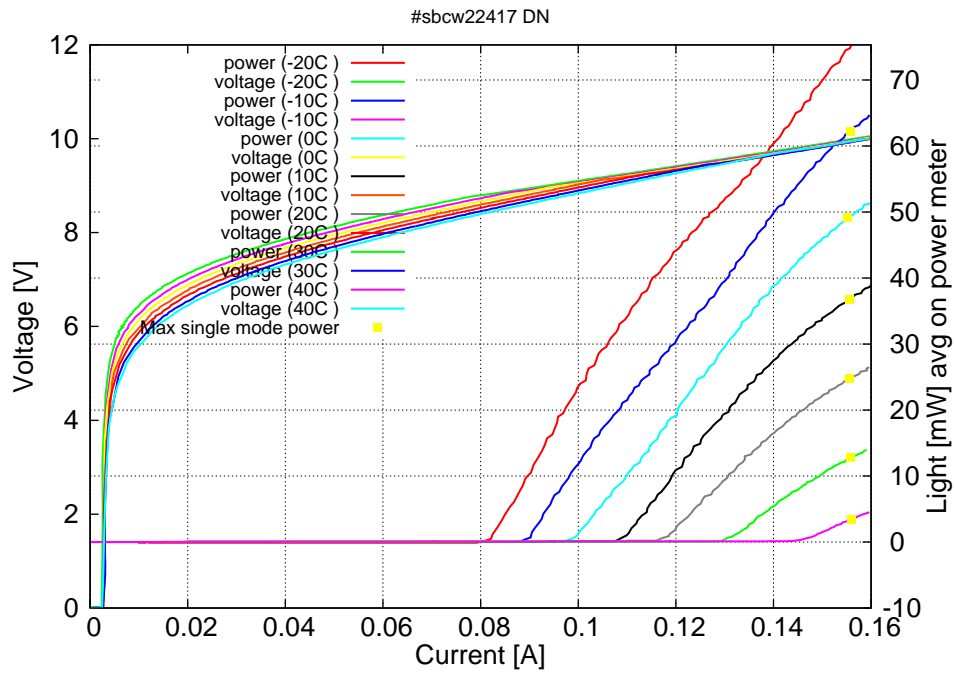


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.16A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

