

Datasheet for #sbcw22415 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 #sbcw22415 DN (please note that AlN submount numbering is A0YHF)

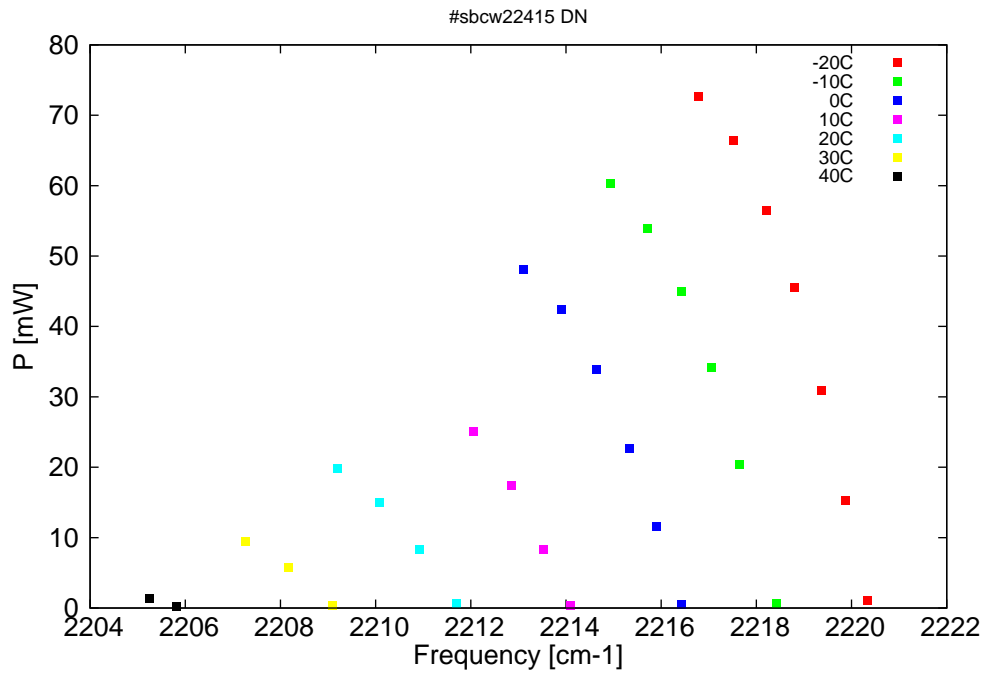


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

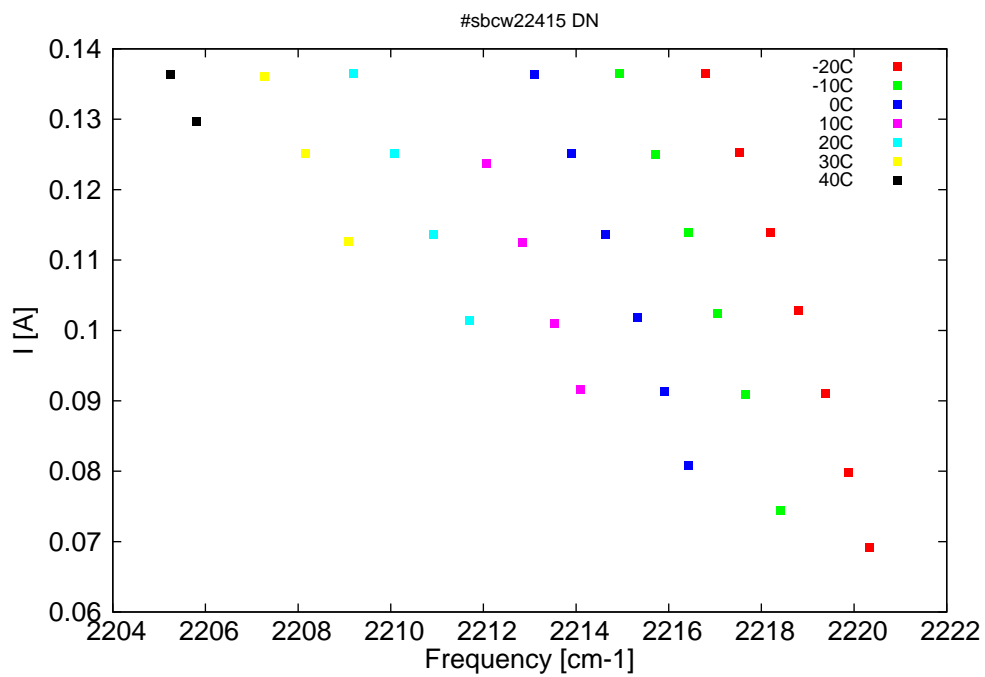


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4503.8	2220.3	1.1	-20	8.93	0.069
4504.8	2219.9	15.3	-20	9.14	0.08
4505.8	2219.4	30.9	-20	9.36	0.091
4506.9	2218.8	45.5	-20	9.59	0.103
4508.1	2218.2	56.5	-20	9.81	0.114
4509.5	2217.5	66.4	-20	10.04	0.125
4511	2216.8	72.7	-20	10.28	0.136
4507.7	2218.4	0.7	-10	9	0.074
4509.3	2217.6	20.4	-10	9.33	0.091
4510.5	2217.1	34.2	-10	9.56	0.102
4511.7	2216.4	45	-10	9.78	0.114
4513.2	2215.7	53.9	-10	10.02	0.125
4514.8	2214.9	60.3	-10	10.27	0.137
4511.8	2216.4	0.5	0	9.11	0.081
4512.8	2215.9	11.6	0	9.31	0.091
4514	2215.3	22.7	0	9.53	0.102
4515.4	2214.6	33.8	0	9.77	0.114
4516.9	2213.9	42.4	0	10	0.125
4518.5	2213.1	48.1	0	10.25	0.136
4516.5	2214.1	0.4	10	9.33	0.092
4517.7	2213.5	8.3	10	9.51	0.101
4519.1	2212.8	17.4	10	9.75	0.113
4520.7	2212.1	25.1	10	9.99	0.124
4521.4	2211.7	0.6	20	9.52	0.101
4523	2210.9	8.2	20	9.76	0.114
4524.7	2210.1	15	20	10.01	0.125
4526.5	2209.2	19.8	20	10.27	0.136
4526.8	2209.1	0.3	30	9.76	0.113
4528.6	2208.2	5.8	30	10.02	0.125
4530.5	2207.3	9.5	30	10.27	0.136
4533.5	2205.8	0.2	40	10.16	0.13
4534.6	2205.2	1.3	40	10.3	0.136

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

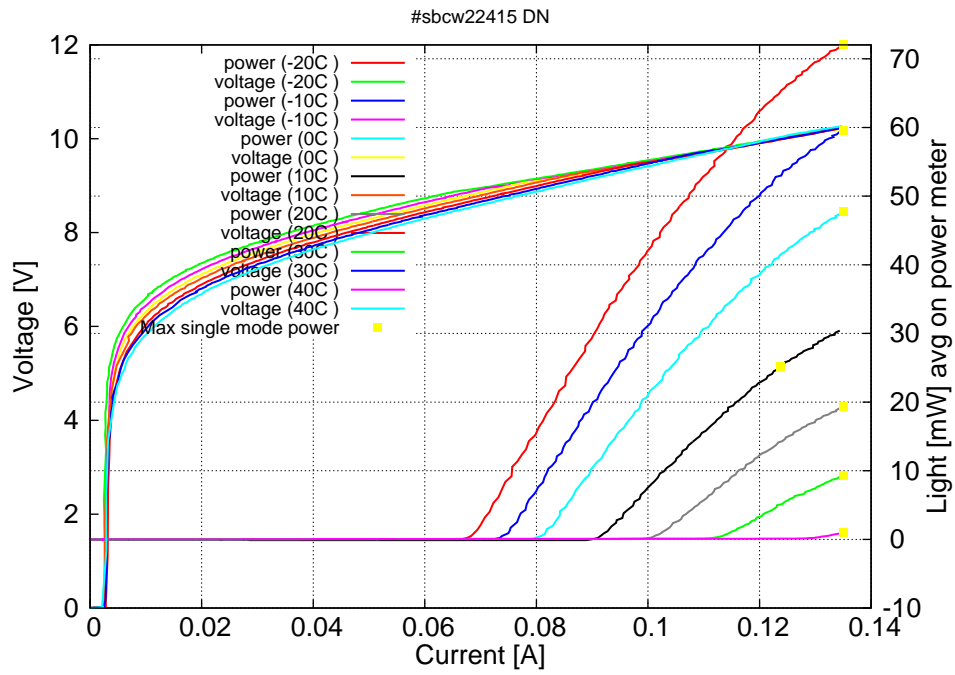


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.135A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

