

Datasheet for #sbcw24316 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 #sbcw24316 DN (please note that AlN submount numbering is A110Z)

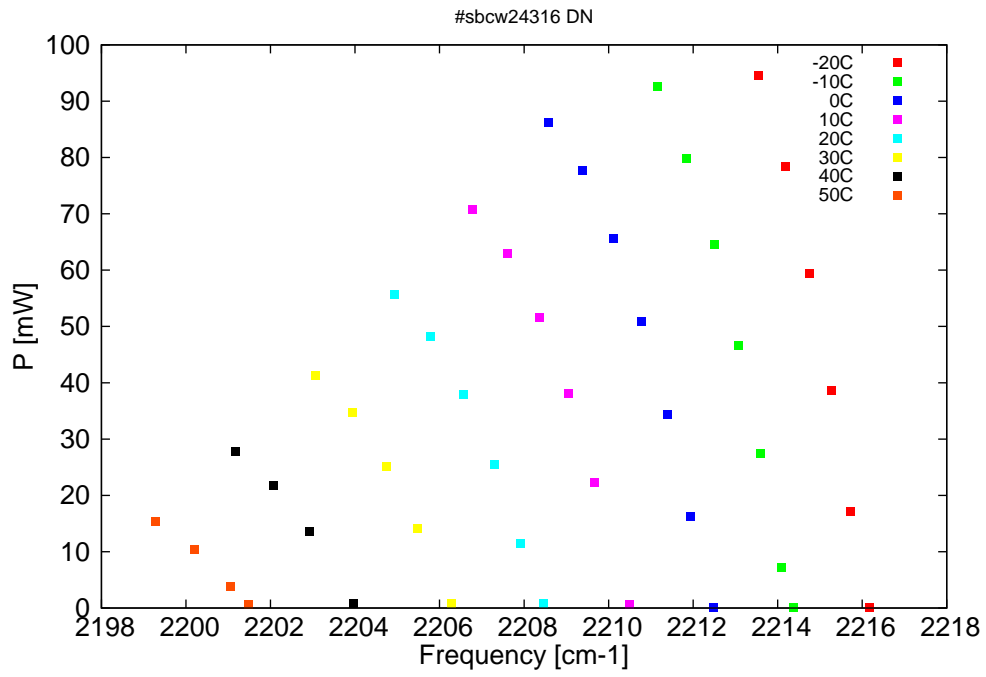


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

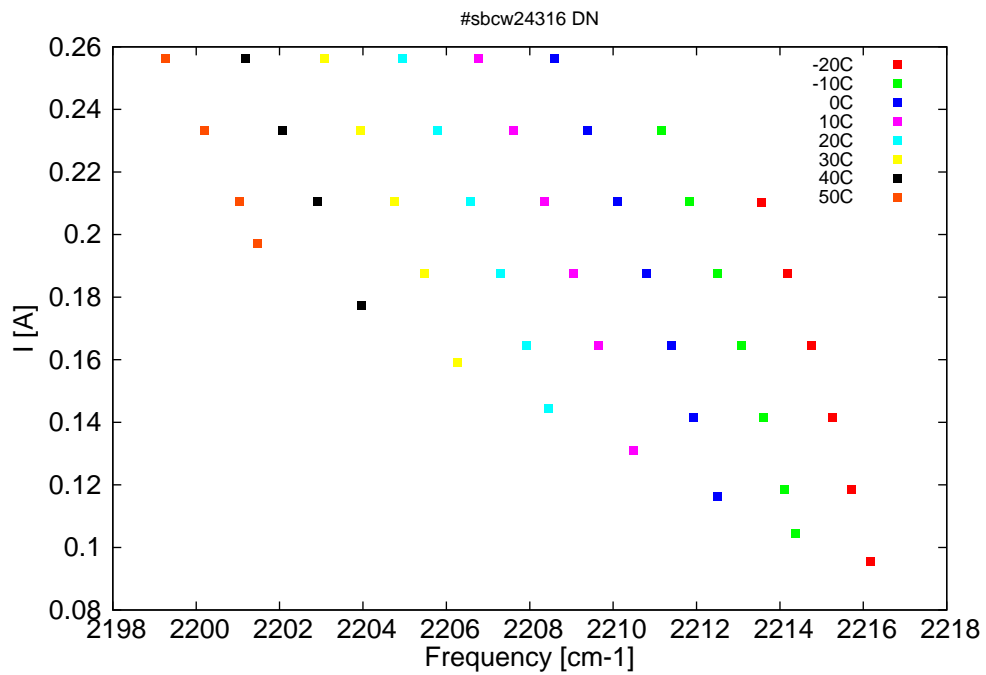


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4512.3	2216.2	0	-20	8.44	0.095
4513.2	2215.7	17.2	-20	8.67	0.118
4514.1	2215.3	38.7	-20	8.9	0.141
4515.2	2214.8	59.3	-20	9.11	0.164
4516.3	2214.2	78.4	-20	9.33	0.187
4517.6	2213.6	94.6	-20	9.55	0.21
4515.9	2214.4	0	-10	8.48	0.104
4516.5	2214.1	7.2	-10	8.62	0.118
4517.5	2213.6	27.4	-10	8.84	0.141
4518.6	2213.1	46.6	-10	9.06	0.164
4519.8	2212.5	64.5	-10	9.28	0.187
4521.1	2211.8	79.8	-10	9.51	0.21
4522.5	2211.1	92.7	-10	9.74	0.233
4519.8	2212.5	0.1	0	8.55	0.116
4520.9	2211.9	16.3	0	8.79	0.141
4522	2211.4	34.3	0	9.01	0.164
4523.3	2210.8	50.9	0	9.24	0.187
4524.7	2210.1	65.6	0	9.46	0.21
4526.1	2209.4	77.7	0	9.7	0.233
4527.8	2208.6	86.2	0	9.94	0.256
4523.9	2210.5	0.6	10	8.65	0.131
4525.6	2209.7	22.3	10	8.97	0.164
4526.8	2209	38	10	9.19	0.187
4528.3	2208.4	51.6	10	9.42	0.21
4529.8	2207.6	63	10	9.66	0.233
4531.5	2206.8	70.8	10	9.91	0.256
4528.1	2208.4	0.7	20	8.74	0.144
4529.1	2207.9	11.5	20	8.93	0.164
4530.4	2207.3	25.4	20	9.15	0.187
4531.9	2206.6	38	20	9.39	0.21
4533.5	2205.8	48.2	20	9.63	0.233
4535.3	2204.9	55.6	20	9.88	0.256
4532.5	2206.3	0.8	30	8.86	0.159
4534.2	2205.5	14.1	30	9.12	0.187
4535.7	2204.8	25.2	30	9.36	0.21
4537.3	2203.9	34.7	30	9.6	0.233
4539.1	2203.1	41.3	30	9.85	0.256
4537.3	2204	0.8	40	9.01	0.177
4539.4	2202.9	13.5	40	9.33	0.21
4541.2	2202.1	21.8	40	9.57	0.233
4543	2201.2	27.8	40	9.82	0.256
4542.4	2201.5	0.6	50	9.19	0.197
4543.3	2201	3.9	50	9.32	0.21
4545.1	2200.2	10.4	50	9.55	0.233
4547	2199.3	15.4	50	9.8	0.256

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

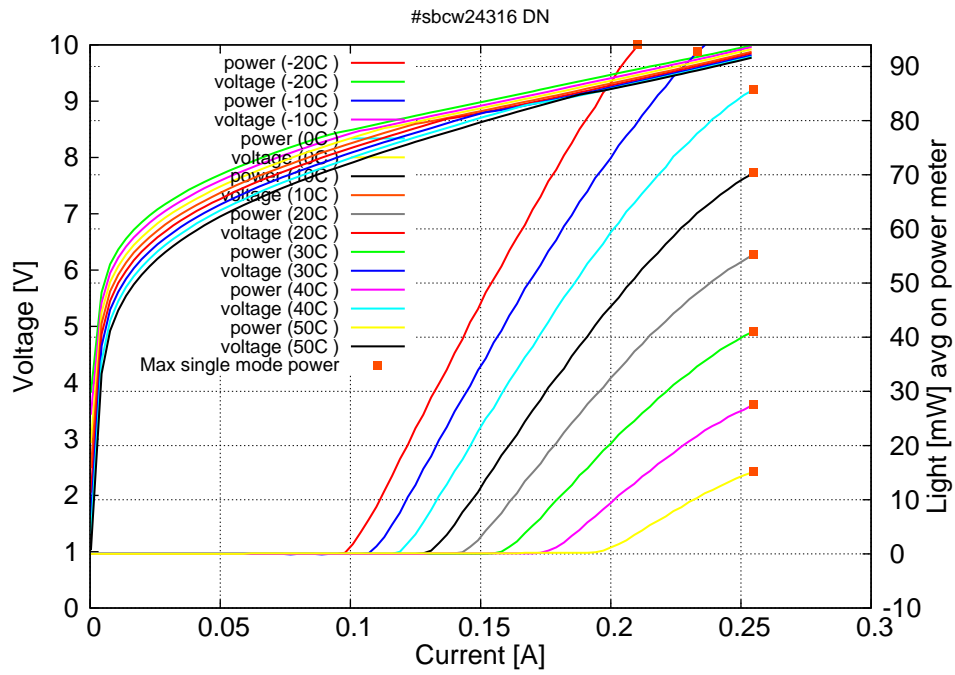


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.21A at -20C, 0.235A at -10C, 0.255A between 0C and 50C.

