

Datasheet for #sbcw19932 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 #sbcw19932 DN (please note that AlN submount numbering is A0NXG)

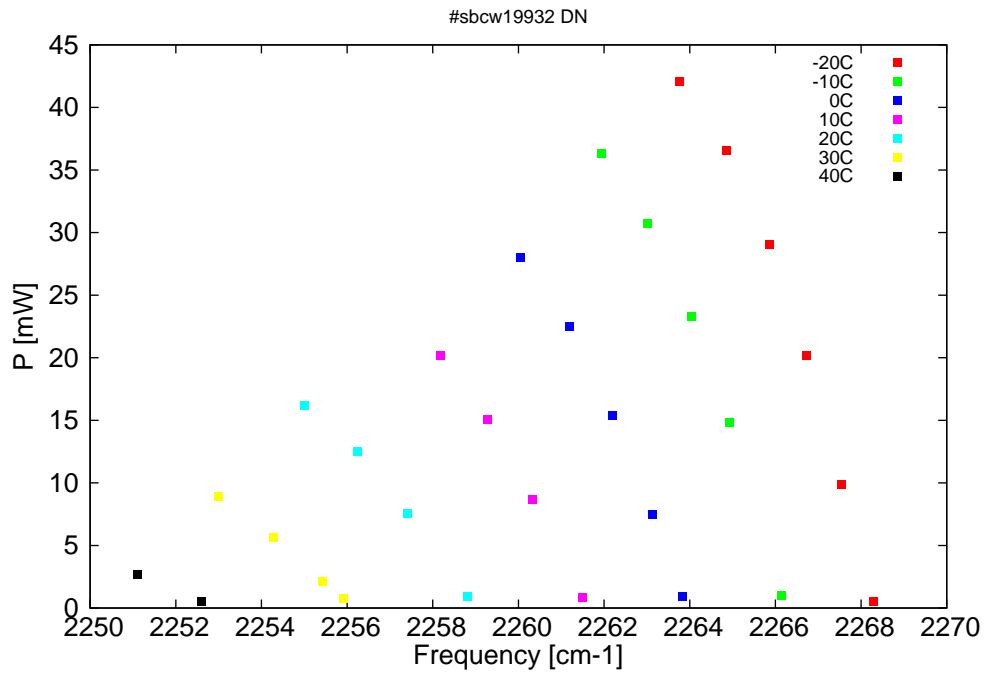


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

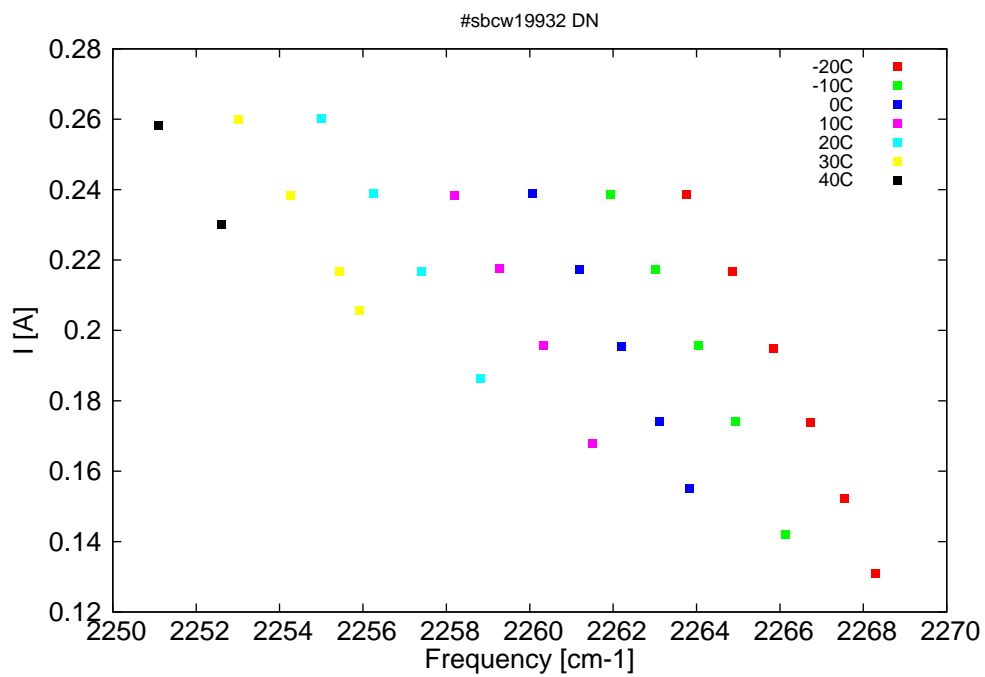


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4408.6	2268.3	0.5	-20	12.6	0.131
4410	2267.6	9.9	-20	12.84	0.152
4411.6	2266.7	20.1	-20	13.1	0.174
4413.3	2265.9	29.1	-20	13.36	0.195
4415.3	2264.9	36.5	-20	13.63	0.217
4417.4	2263.8	42.1	-20	13.89	0.239
4412.8	2266.1	1	-10	12.57	0.142
4415.1	2264.9	14.8	-10	12.97	0.174
4416.9	2264	23.3	-10	13.23	0.196
4418.9	2263	30.8	-10	13.49	0.217
4421	2261.9	36.3	-10	13.75	0.239
4417.3	2263.8	1	0	12.66	0.155
4418.7	2263.1	7.5	0	12.86	0.174
4420.5	2262.2	15.4	0	13.11	0.195
4422.5	2261.2	22.5	0	13.36	0.217
4424.7	2260.1	28	0	13.62	0.239
4421.8	2261.5	0.8	10	12.71	0.168
4424.1	2260.3	8.7	10	13	0.196
4426.2	2259.3	15.1	10	13.25	0.218
4428.3	2258.2	20.1	10	13.49	0.238
4427.1	2258.8	0.9	20	12.83	0.186
4429.9	2257.4	7.5	20	13.14	0.217
4432.1	2256.2	12.5	20	13.38	0.239
4434.6	2255	16.2	20	13.63	0.26
4432.8	2255.9	0.8	30	12.98	0.206
4433.7	2255.4	2.1	30	13.08	0.217
4436	2254.3	5.6	30	13.3	0.238
4438.5	2253	8.9	30	13.54	0.26
4439.3	2252.6	0.5	40	13.18	0.23
4442.3	2251.1	2.7	40	13.44	0.258

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

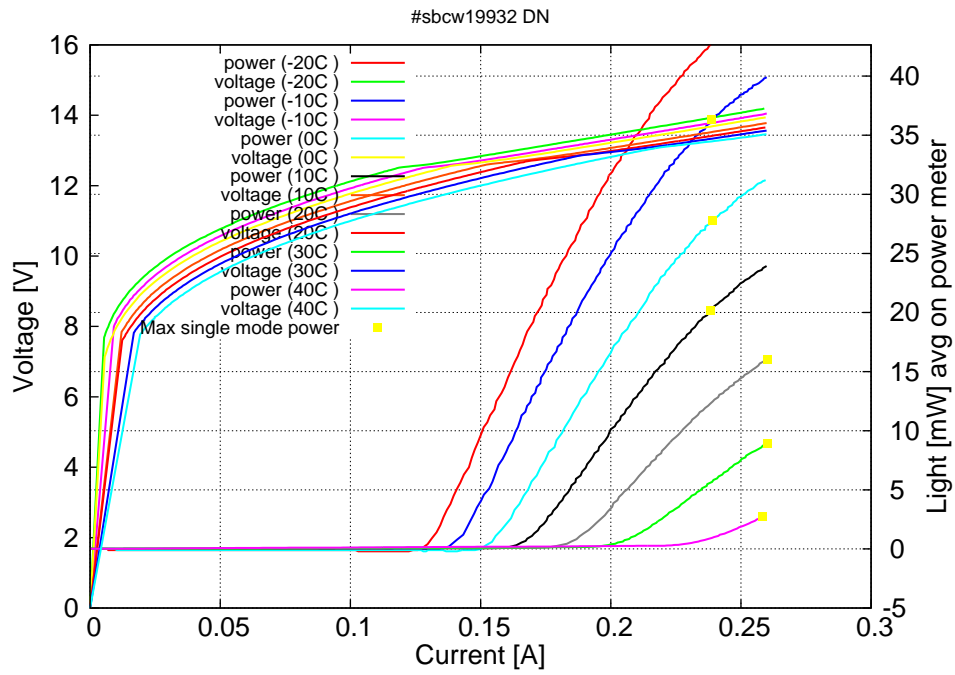


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=12.6V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and 10C, 0.26A between 20C and 40C.

Figure 3: spectra at different temperatures for various DC currents

