

Datasheet for #sbcw19892 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

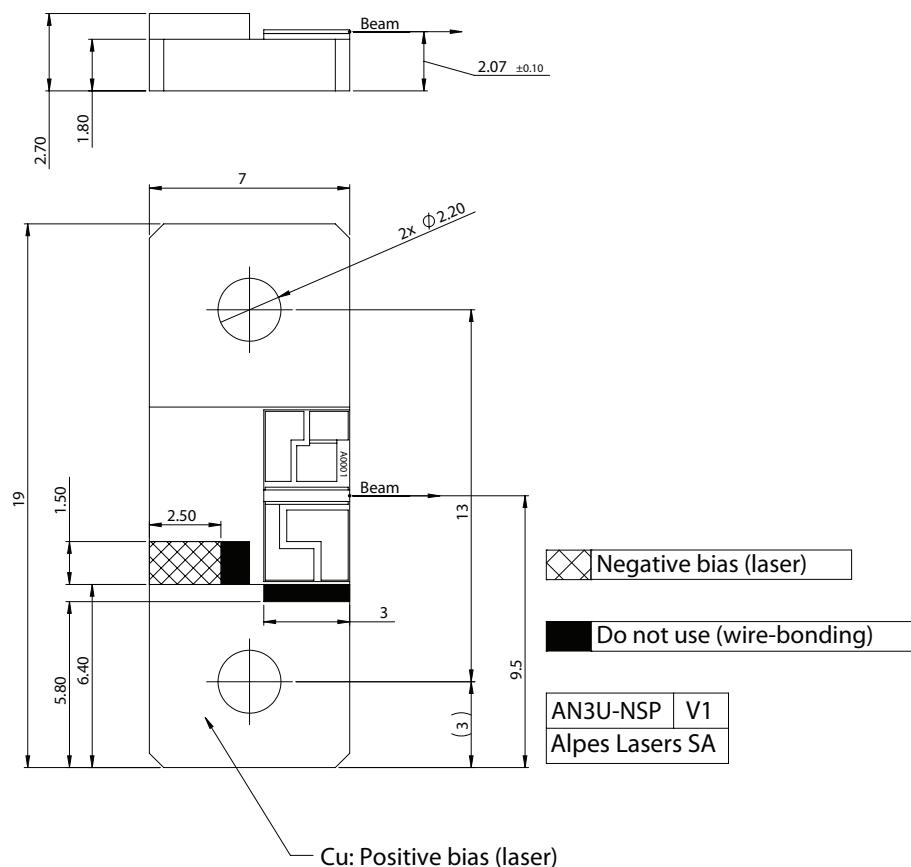


Figure 1: Mechanical and electrical interface for #sbcw19892 DN

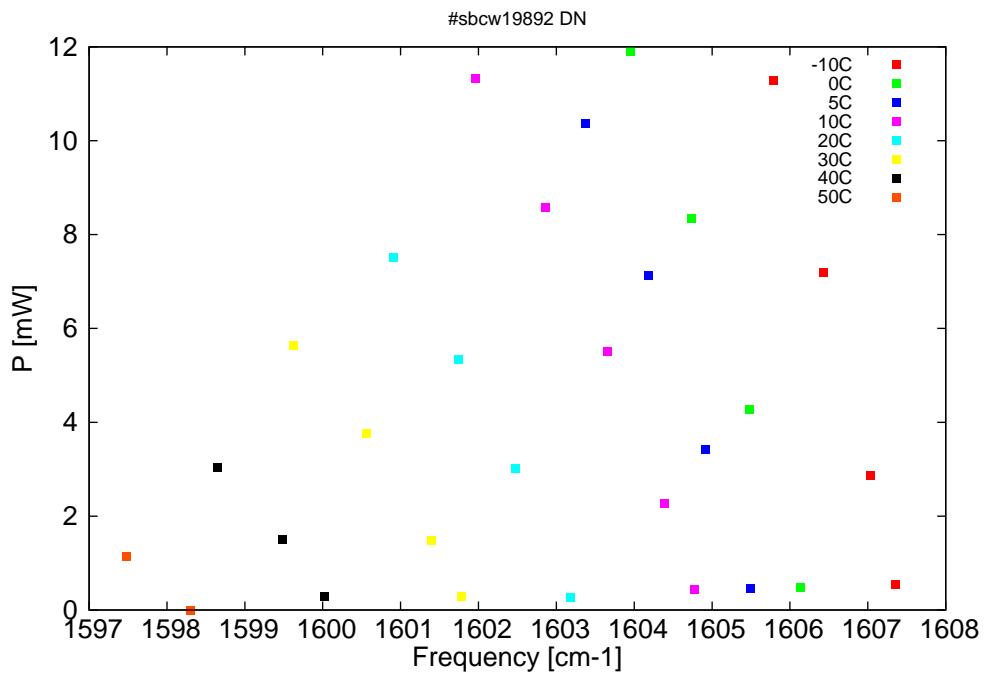


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

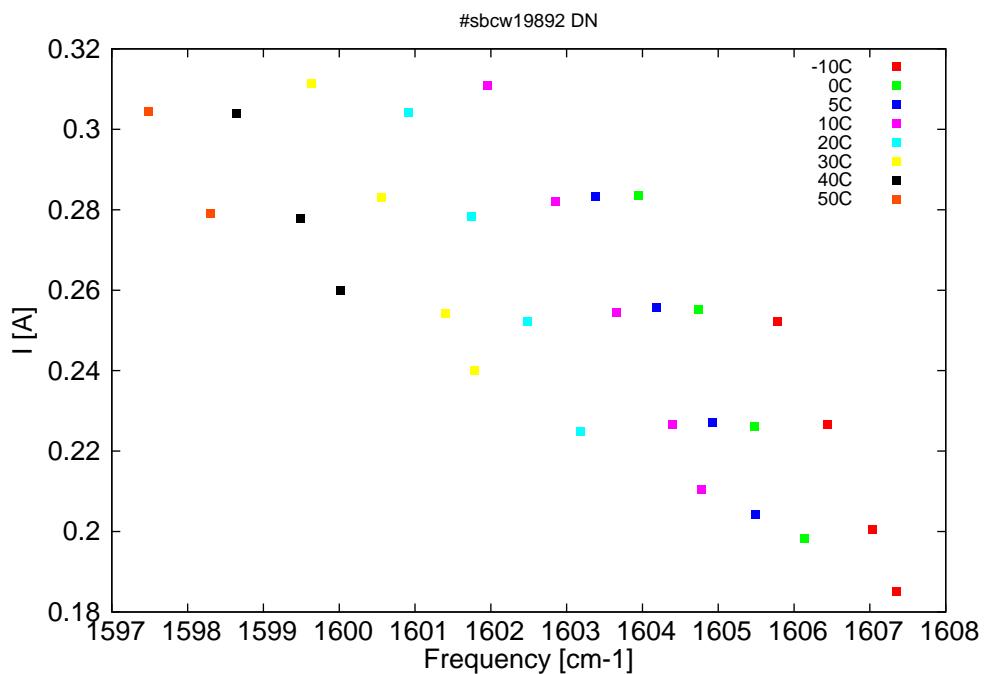


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6221.4	1607.4	0.5	-10	9.67	0.185
6222.6	1607	2.9	-10	9.86	0.201
6225	1606.4	7.2	-10	10.17	0.227
6227.5	1605.8	11.3	-10	10.49	0.252
6226.1	1606.1	0.5	0	9.79	0.198
6228.7	1605.5	4.3	0	10.14	0.226
6231.6	1604.7	8.3	0	10.5	0.255
6234.6	1604	11.9	0	10.87	0.284
6228.6	1605.5	0.4	5	9.82	0.204
6230.8	1604.9	3.4	5	10.11	0.227
6233.7	1604.2	7.1	5	10.47	0.256
6236.8	1603.4	10.4	5	10.84	0.283
6231.4	1604.8	0.4	10	9.86	0.21
6232.9	1604.4	2.3	10	10.06	0.227
6235.8	1603.7	5.5	10	10.42	0.254
6238.9	1602.9	8.6	10	10.79	0.282
6242.4	1602	11.3	10	11.18	0.311
6237.6	1603.2	0.3	20	9.94	0.225
6240.3	1602.5	3	20	10.28	0.252
6243.2	1601.7	5.3	20	10.63	0.278
6246.4	1600.9	7.5	20	10.98	0.304
6243	1601.8	0.3	30	10.1	0.24
6244.5	1601.4	1.5	30	10.27	0.254
6247.8	1600.6	3.8	30	10.65	0.283
6251.4	1599.6	5.6	30	11.04	0.311
6249.9	1600	0.3	40	10.24	0.26
6252	1599.5	1.5	40	10.47	0.278
6255.3	1598.6	3	40	10.82	0.304
6256.6	1598.3	0	50	10.41	0.279
6259.9	1597.5	1.1	50	10.75	0.304

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

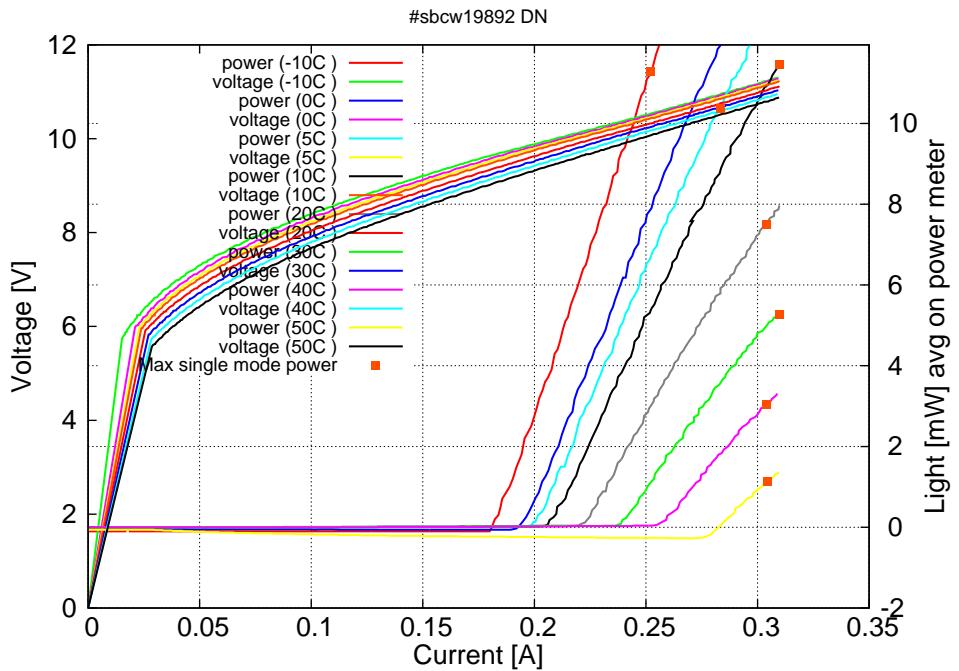


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.18A$ / $V_{th}=9.6V$ (2-wires measurements). Maximum operation current: 0.25A at -10C, 0.285A between 0C and 5C, 0.31A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

