

Datasheet for #sbcw21098 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.

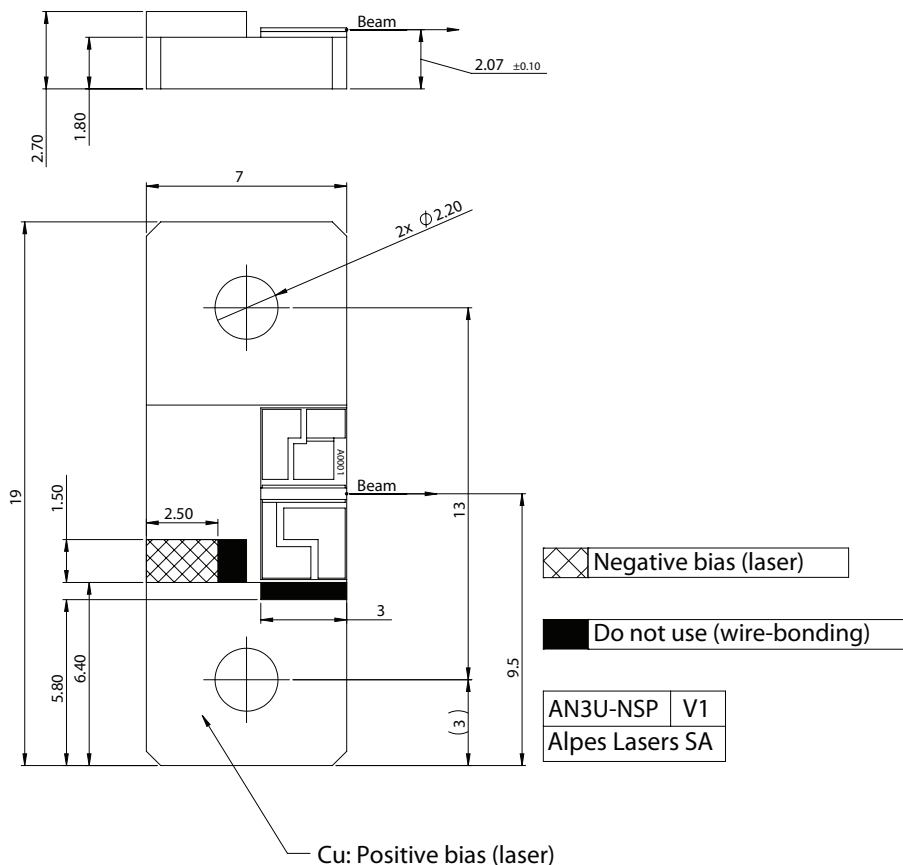


Figure 1: Mechanical and electrical interface for #sbcw21098 DN

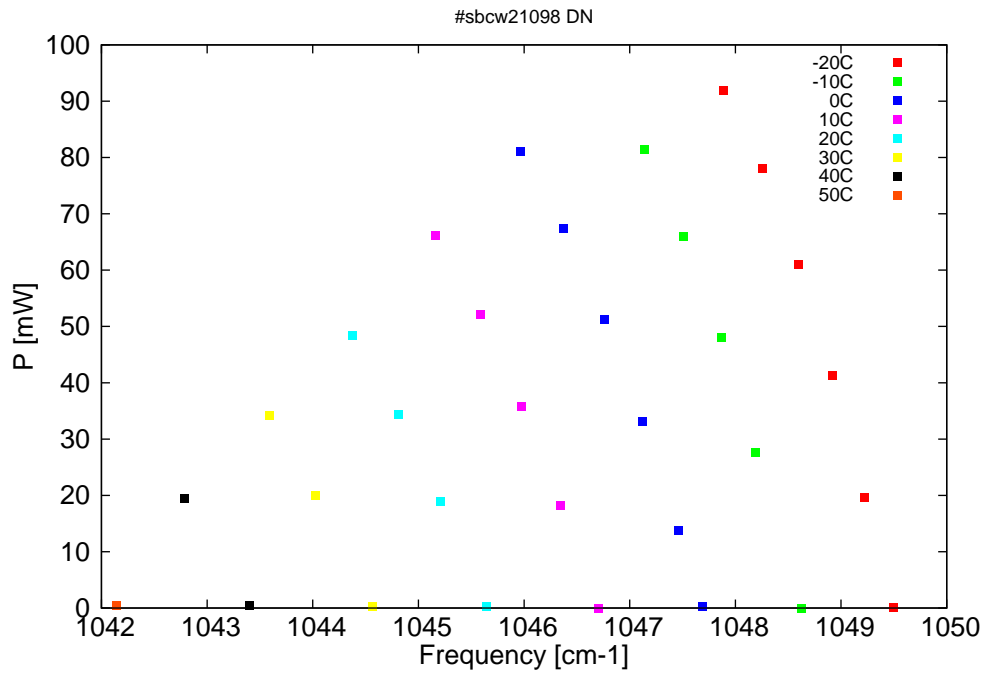


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

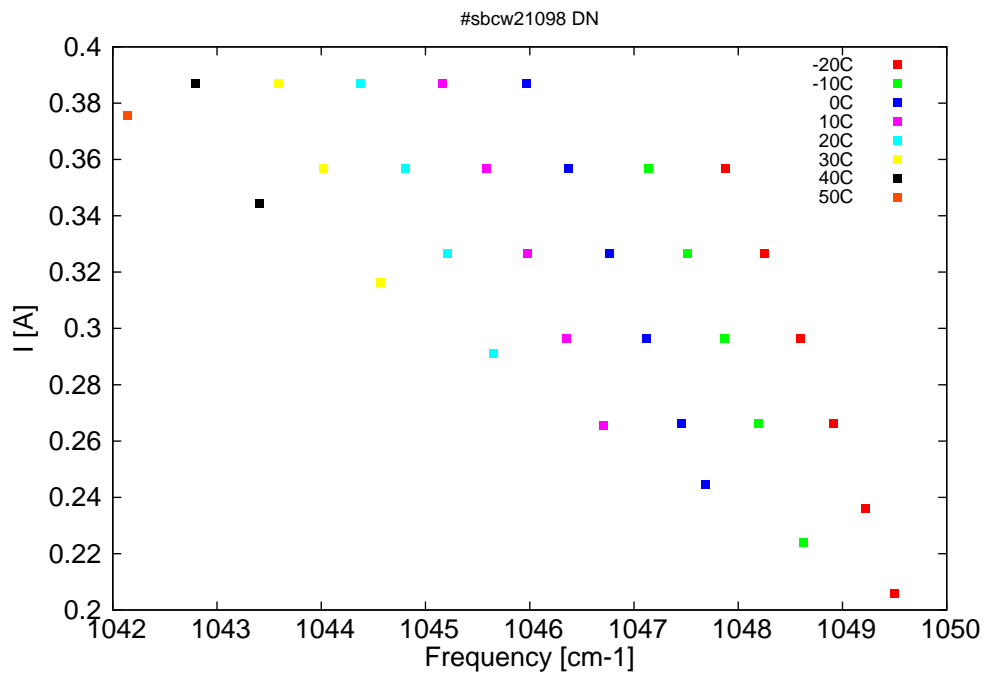


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9528.4	1049.5	0.1	-20	8.76	0.206
9530.9	1049.2	19.7	-20	9	0.236
9533.6	1048.9	41.2	-20	9.23	0.266
9536.6	1048.6	60.9	-20	9.46	0.296
9539.7	1048.3	78.1	-20	9.68	0.327
9543	1047.9	91.8	-20	9.9	0.357
9536.3	1048.6	0	-10	8.84	0.224
9540.2	1048.2	27.6	-10	9.17	0.266
9543.2	1047.9	48	-10	9.4	0.296
9546.4	1047.5	66	-10	9.62	0.327
9549.8	1047.1	81.5	-10	9.85	0.357
9544.8	1047.7	0.3	0	8.93	0.245
9546.9	1047.5	13.7	0	9.1	0.266
9550	1047.1	33.2	0	9.34	0.296
9553.3	1046.8	51.3	0	9.57	0.327
9556.8	1046.4	67.4	0	9.79	0.357
9560.5	1046	81.1	0	10.01	0.387
9553.8	1046.7	0	10	9.04	0.266
9557	1046.3	18.2	10	9.29	0.296
9560.4	1046	35.7	10	9.52	0.327
9564	1045.6	52.1	10	9.75	0.357
9567.9	1045.2	66.2	10	9.98	0.387
9563.4	1045.6	0.3	20	9.18	0.291
9567.5	1045.2	18.9	20	9.47	0.327
9571.1	1044.8	34.4	20	9.7	0.357
9575.1	1044.4	48.4	20	9.93	0.387
9573.4	1044.6	0.2	30	9.33	0.316
9578.3	1044	20	30	9.65	0.357
9582.3	1043.6	34.2	30	9.88	0.387
9584	1043.4	0.5	40	9.5	0.345
9589.7	1042.8	19.5	40	9.83	0.387
9595.6	1042.1	0.5	50	9.7	0.376

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

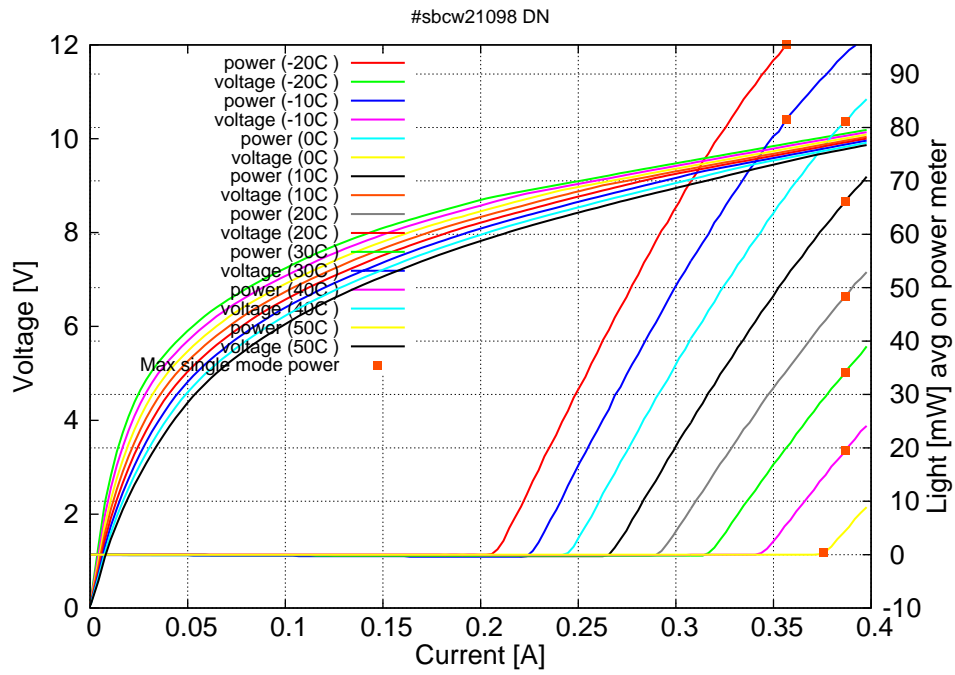


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.36A between -20C and -10C, 0.39A between 0C and 50C.

Figure 3: spectra at different temperatures for various DC currents

