

Datasheet for #sbcw9097 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.

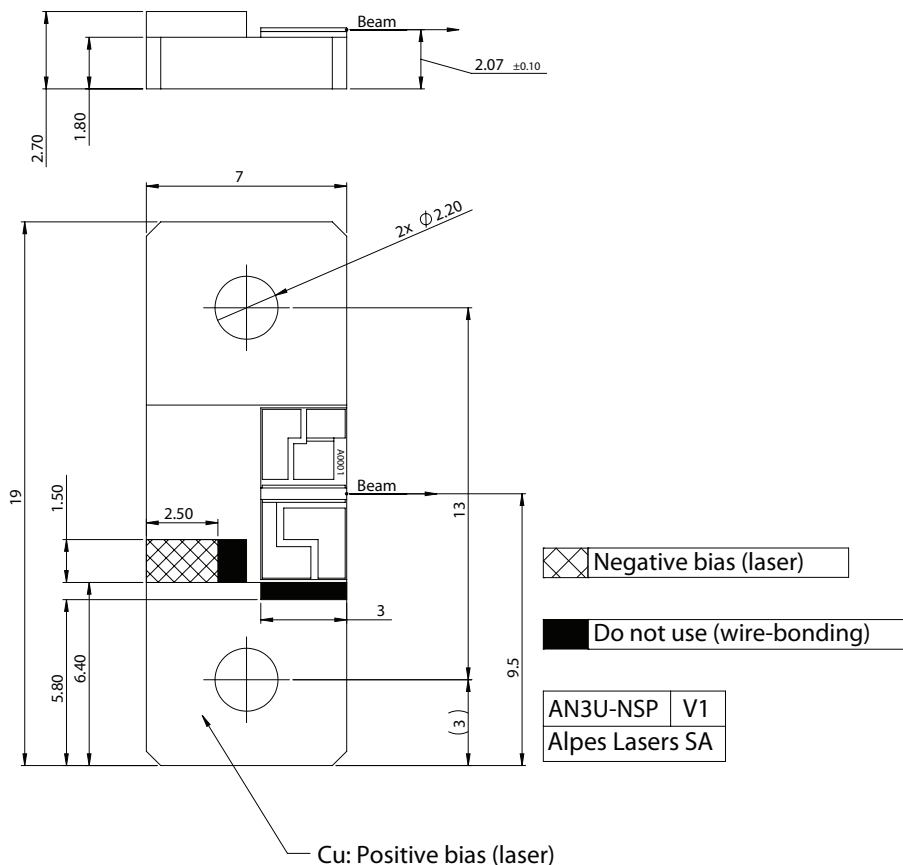


Figure 1: Mechanical and electrical interface for #sbcw9097 DN

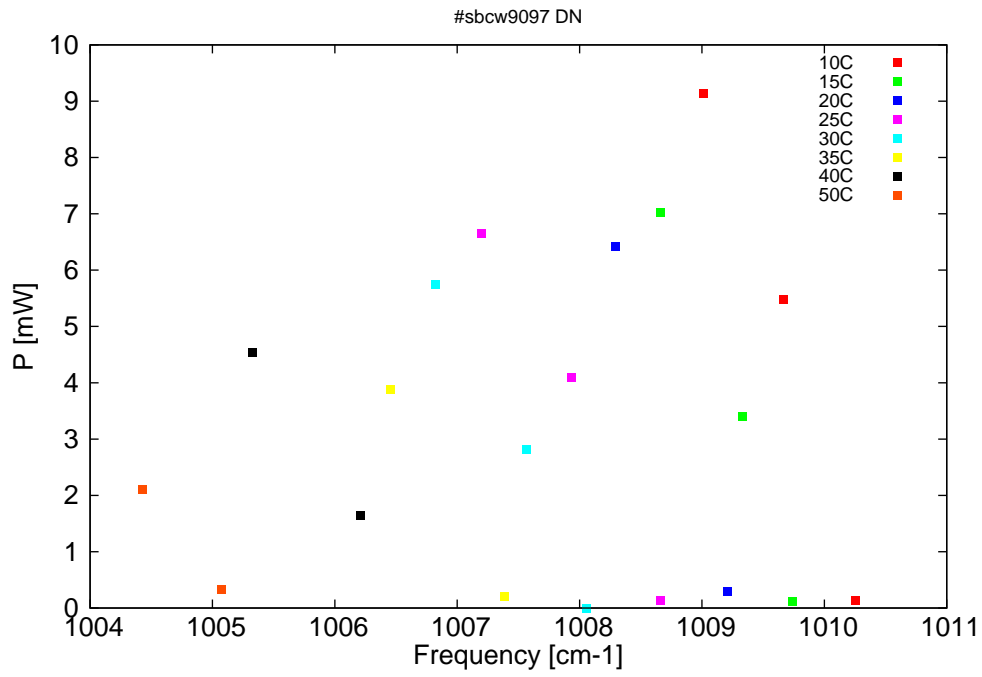


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

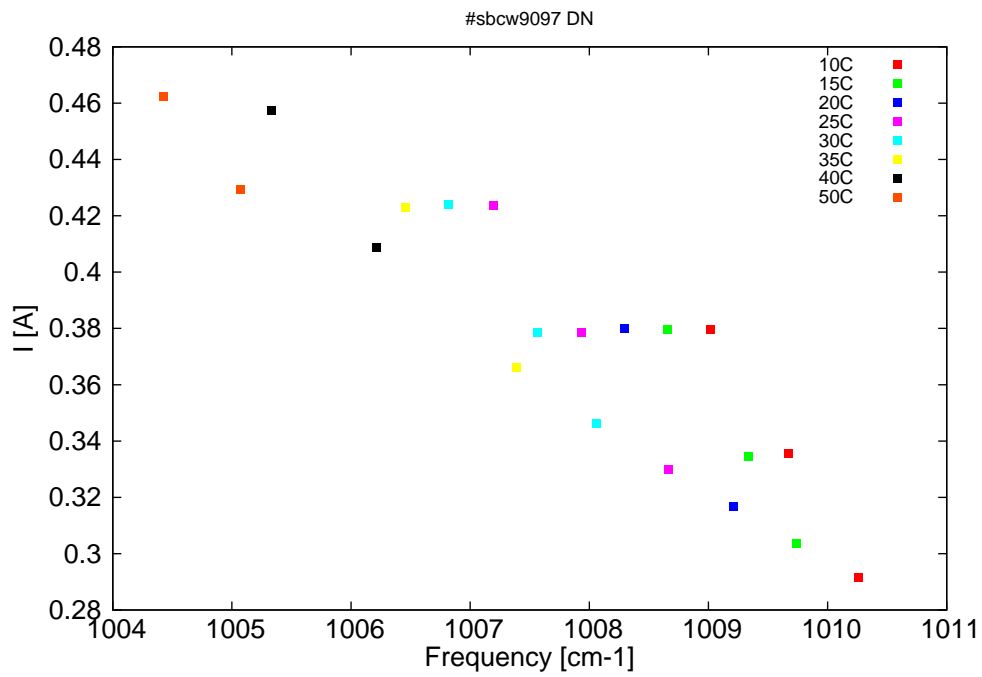


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm^{-1}]	P[mW]	Temp[$^{\circ}\text{C}$]	U_{LASER} [V]	I[A]
9898.5	1010.3	0.1	10	9.16	0.291
9904.2	1009.7	5.5	10	9.53	0.336
9910.7	1009	9.1	10	9.9	0.38
9903.5	1009.7	0.1	15	9.22	0.304
9907.5	1009.3	3.4	15	9.48	0.334
9914.2	1008.7	7	15	9.85	0.38
9908.7	1009.2	0.3	20	9.29	0.317
9917.7	1008.3	6.4	20	9.81	0.38
9914.1	1008.7	0.1	25	9.37	0.33
9921.3	1007.9	4.1	25	9.77	0.379
9928.5	1007.2	6.7	25	10.14	0.424
9920.1	1008.1	0	30	9.46	0.346
9924.9	1007.6	2.8	30	9.73	0.379
9932.3	1006.8	5.8	30	10.1	0.424
9926.7	1007.4	0.2	35	9.59	0.366
9935.8	1006.5	3.9	35	10.06	0.423
9938.3	1006.2	1.6	40	9.9	0.409
9947	1005.3	4.5	40	10.31	0.457
9949.5	1005.1	0.3	50	10.01	0.429
9955.9	1004.4	2.1	50	10.29	0.462

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

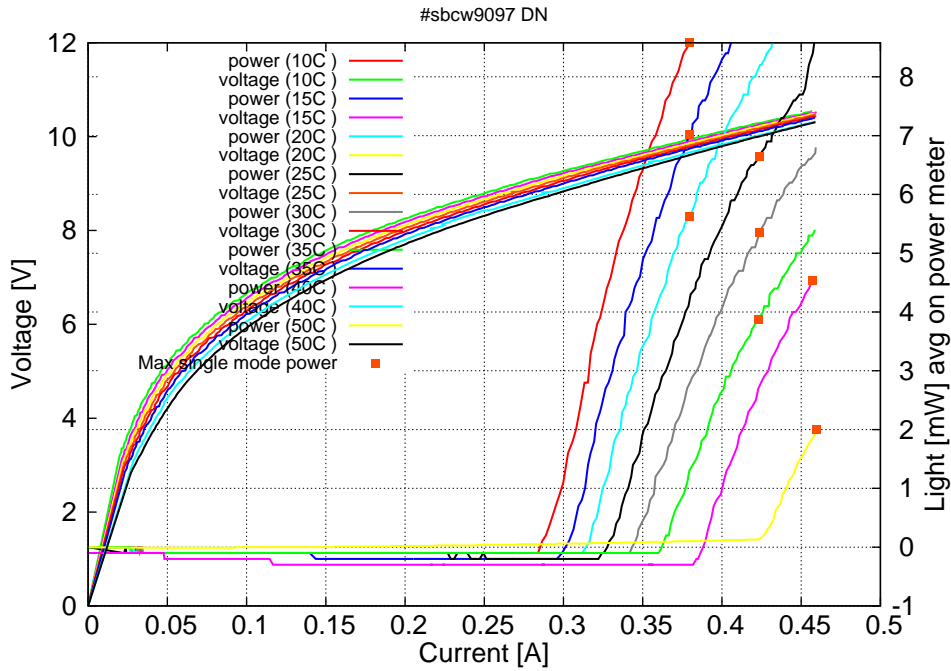


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 10C: $I_{th}=0.28\text{A}$ / $V_{th}=9.1\text{V}$ (2-wires measurements). Maximum operation current: 0.38A between 10C and 20C, 0.425A between 25C and 35C, 0.46A between 40C

and 50C.

Figure 3: spectra at different temperatures for various DC currents

