

Datasheet for #sbcw8130 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.

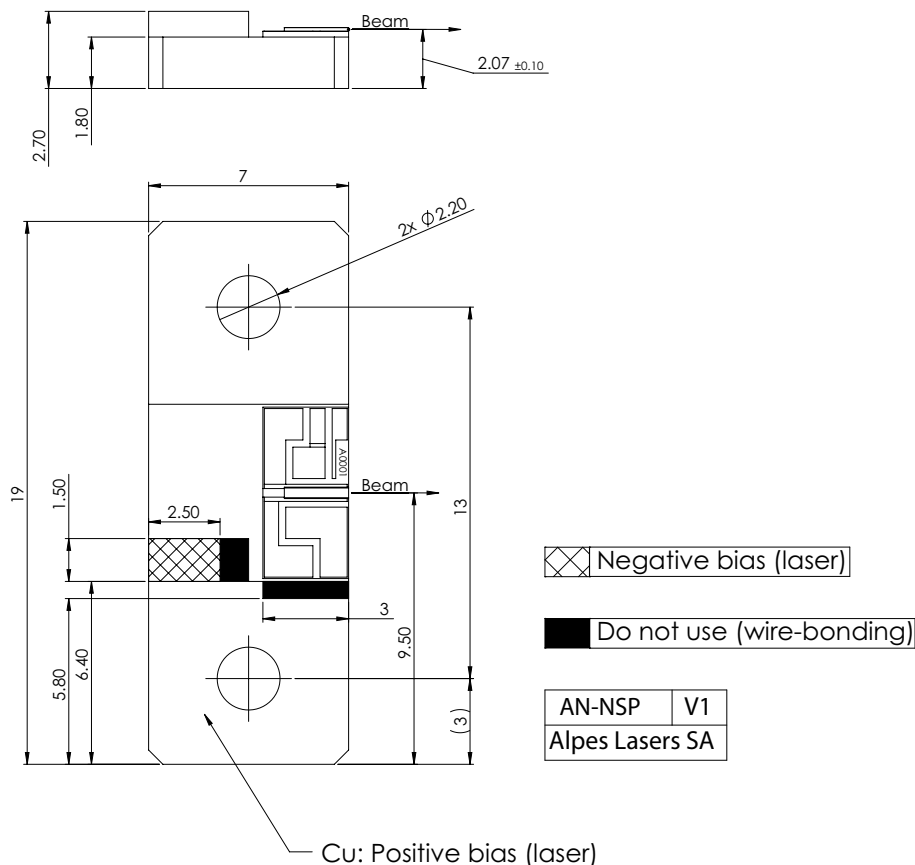


Figure 1: Mechanical and electrical interface for #sbcw8130 DN

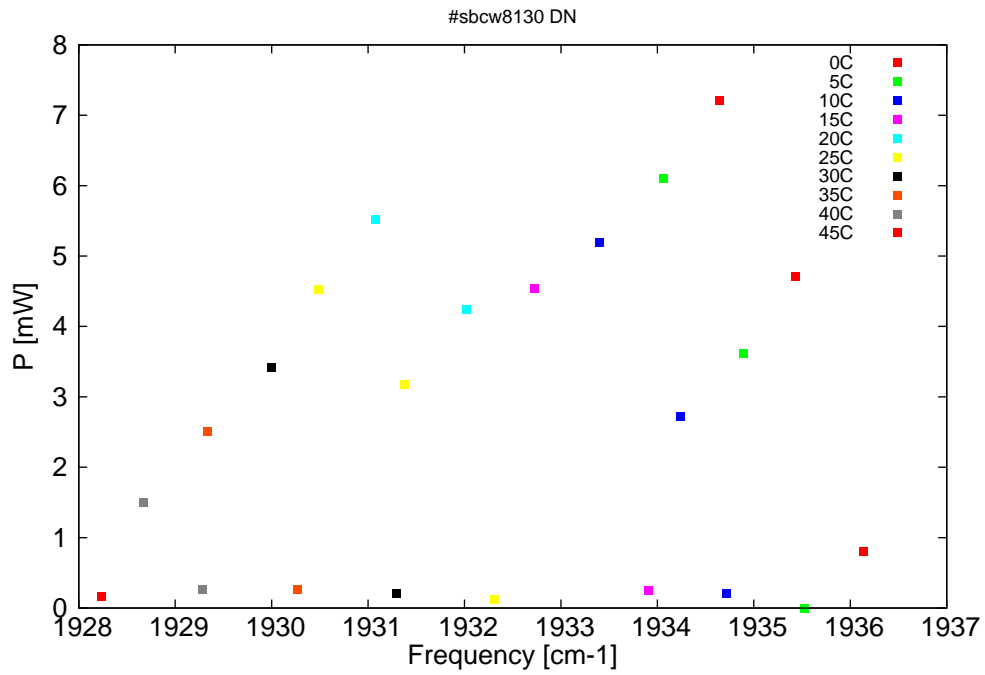


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

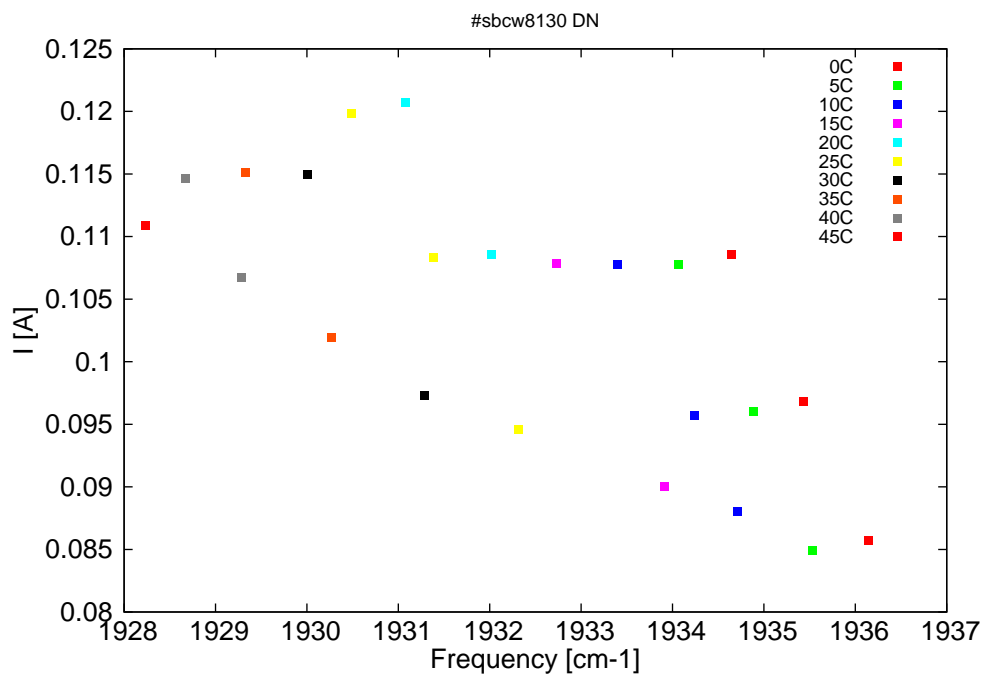


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm^{-1}]	P[mW]	Temp[$^{\circ}\text{C}$]	U_{LASER} [V]	I[A]
5164.9	1936.1	0.8	0	11.7	0.086
5166.8	1935.4	4.7	0	12.04	0.097
5168.9	1934.6	7.2	0	12.44	0.109
5166.5	1935.5	0	5	11.66	0.085
5168.3	1934.9	3.6	5	11.96	0.096
5170.5	1934.1	6.1	5	12.36	0.108
5168.7	1934.7	0.2	10	11.71	0.088
5170	1934.2	2.7	10	11.93	0.096
5172.2	1933.4	5.2	10	12.33	0.108
5170.9	1933.9	0.3	15	11.77	0.09
5174	1932.7	4.5	15	12.31	0.108
5175.9	1932	4.2	20	12.28	0.109
5178.5	1931.1	5.5	20	12.74	0.121
5175.2	1932.3	0.1	25	11.82	0.095
5177.6	1931.4	3.2	25	12.23	0.108
5180	1930.5	4.5	25	12.65	0.12
5177.9	1931.3	0.2	30	11.94	0.097
5181.3	1930	3.4	30	12.5	0.115
5180.6	1930.3	0.3	35	12.07	0.102
5183.1	1929.3	2.5	35	12.48	0.115
5183.3	1929.3	0.3	40	12.19	0.107
5184.9	1928.7	1.5	40	12.44	0.115
5186.1	1928.2	0.2	45	12.3	0.111

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

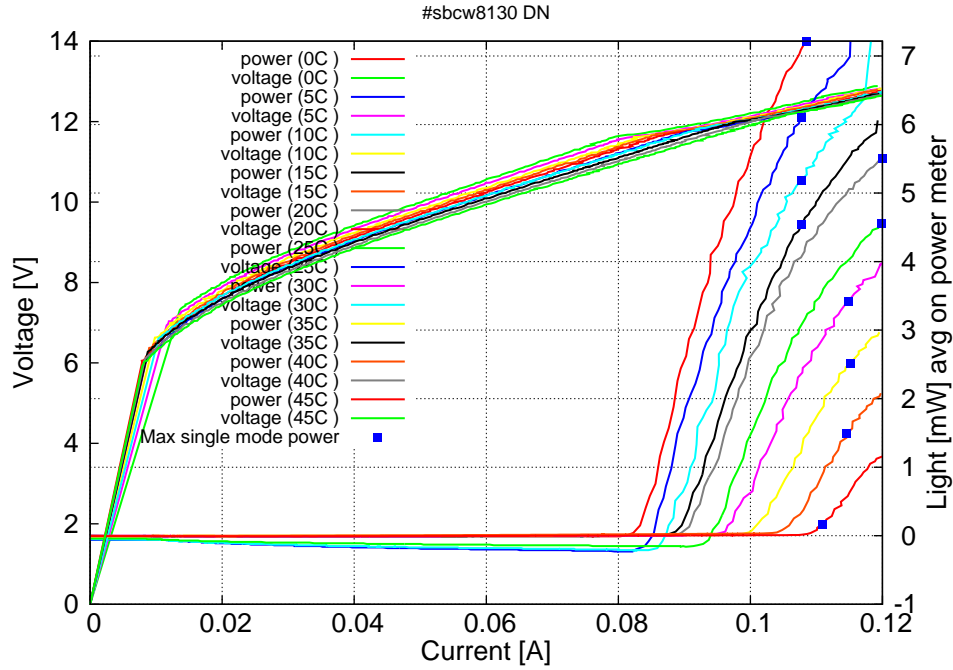


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.08A$ / $V_{th}=11.7V$ (2-wires measurements). Maximum operation current: 0.11A between 0C and 15C, 0.12A between 20C and 45C.

Figure 3: spectra at different temperatures for various DC currents

