

Datasheet for #sbcw8330 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.

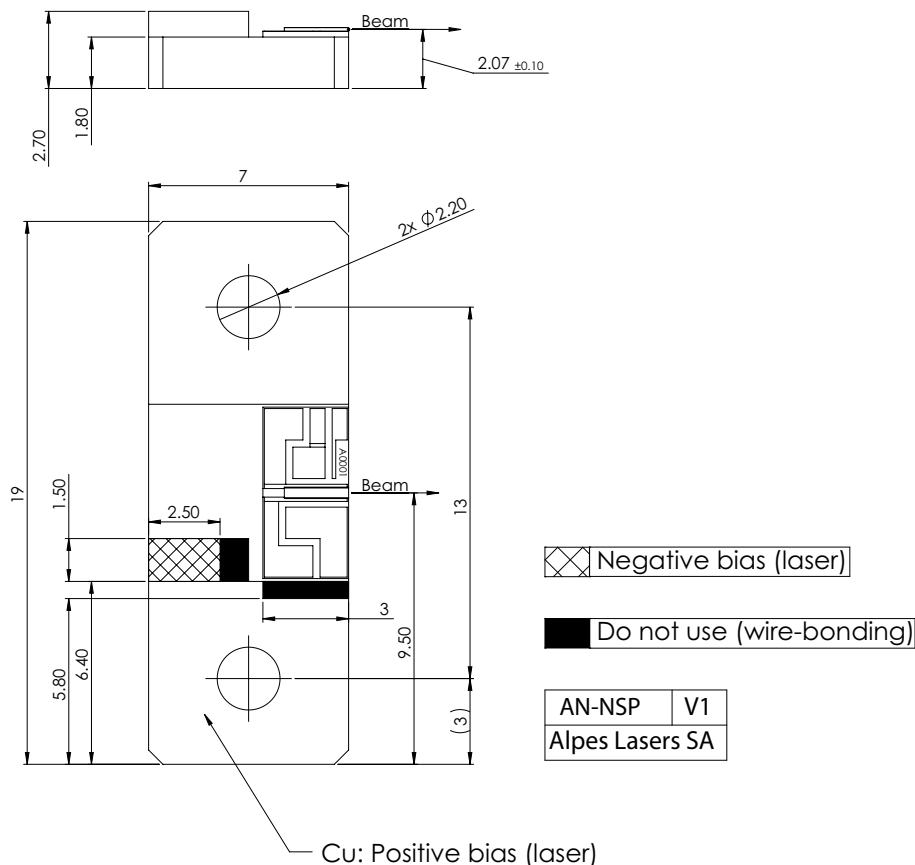


Figure 1: Mechanical and electrical interface for #sbcw8330 DN

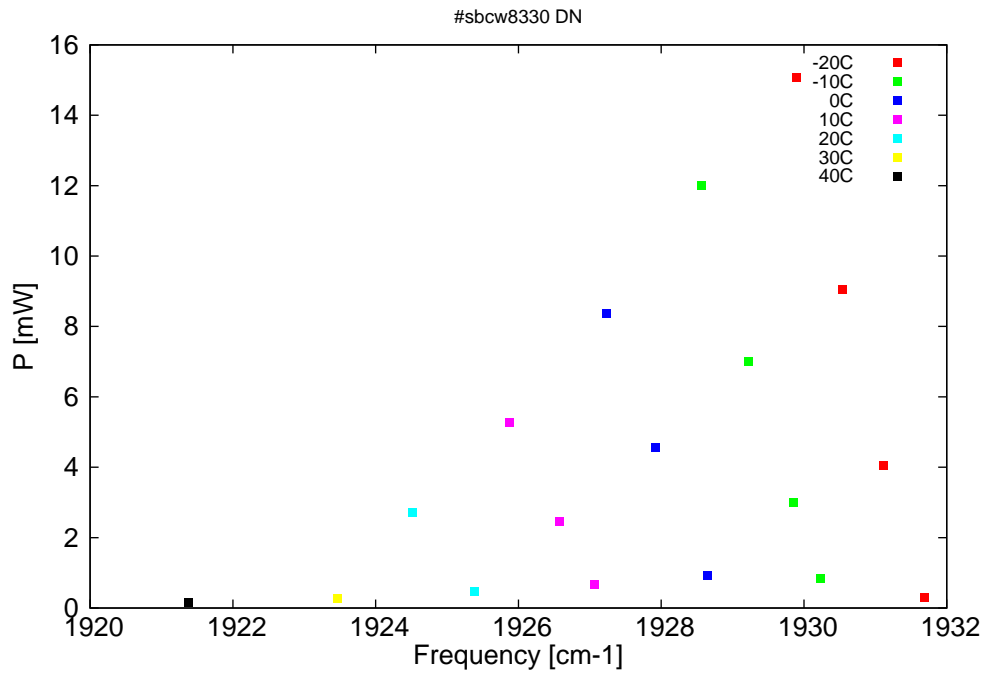


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

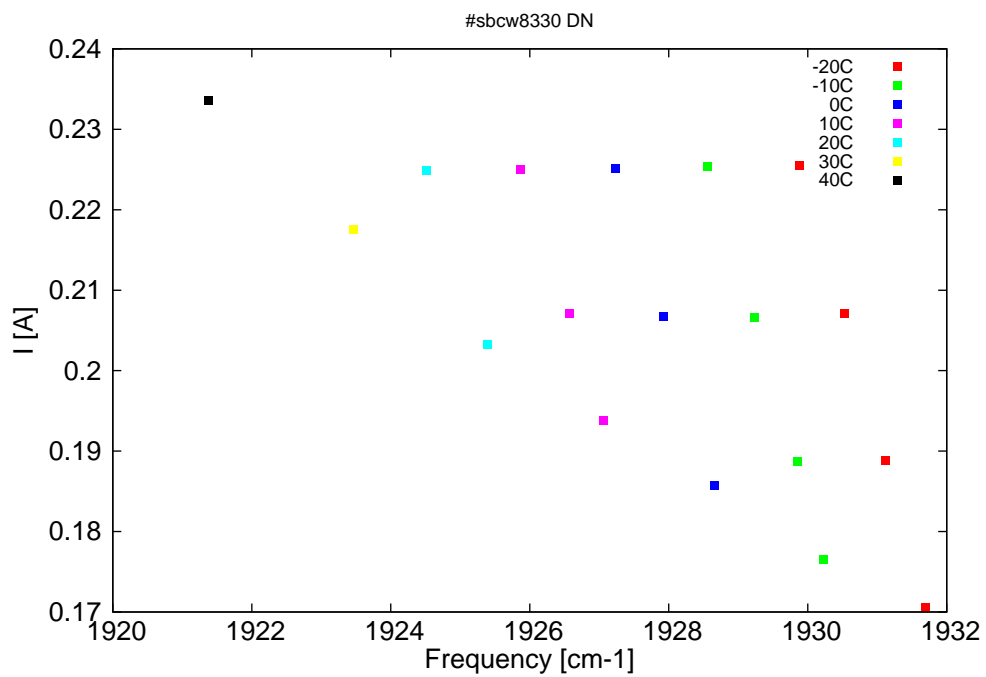


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5176.8	1931.7	0.3	-20	11.8	0.171
5178.3	1931.1	4	-20	12	0.189
5179.9	1930.5	9.1	-20	12.23	0.207
5181.6	1929.9	15.1	-20	12.54	0.225
5180.7	1930.2	0.8	-10	11.84	0.177
5181.7	1929.9	3	-10	11.97	0.189
5183.4	1929.2	7	-10	12.22	0.207
5185.2	1928.6	12	-10	12.52	0.225
5185	1928.7	0.9	0	11.94	0.186
5186.9	1927.9	4.6	0	12.21	0.207
5188.8	1927.2	8.4	0	12.51	0.225
5189.3	1927.1	0.7	10	12.05	0.194
5190.6	1926.6	2.4	10	12.22	0.207
5192.5	1925.9	5.3	10	12.51	0.225
5193.8	1925.4	0.5	20	12.18	0.203
5196.1	1924.5	2.7	20	12.51	0.225
5199	1923.5	0.3	30	12.4	0.218
5204.6	1921.4	0.2	40	12.66	0.234

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

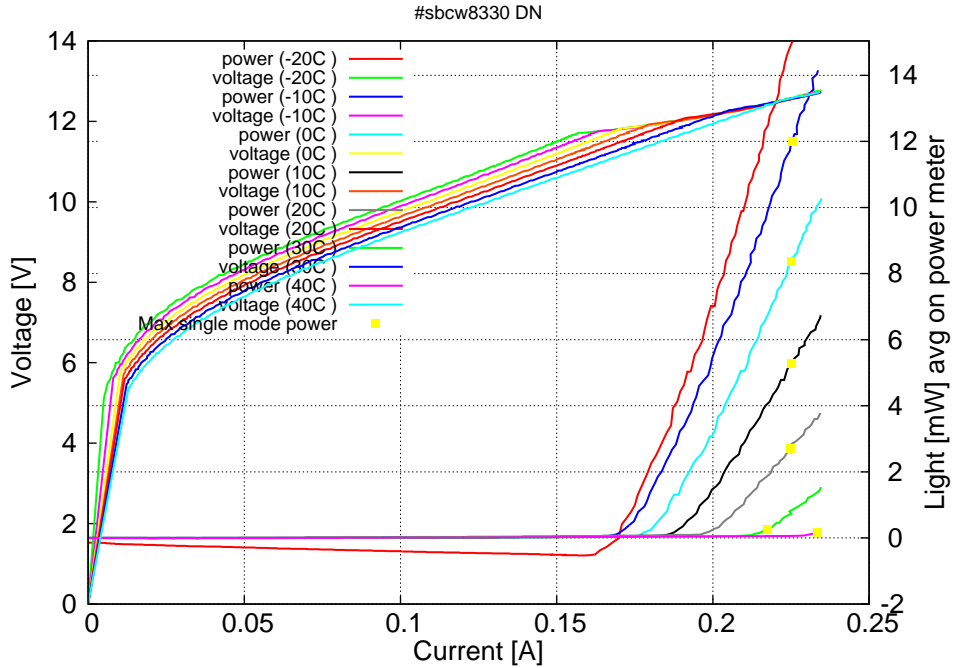


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=11.8V$ (2-wires measurements). Maximum operation current: 0.235A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

