

Datasheet for #sbcw24806 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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.

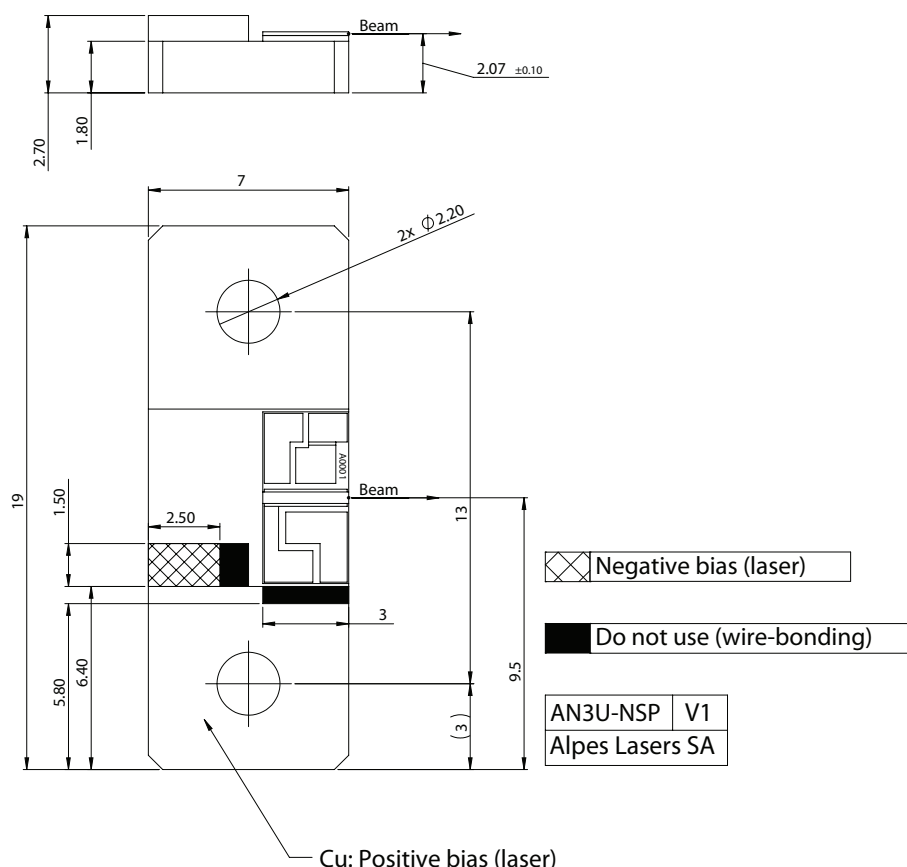


Figure 1: Mechanical and electrical interface for #sbcw24806 DN

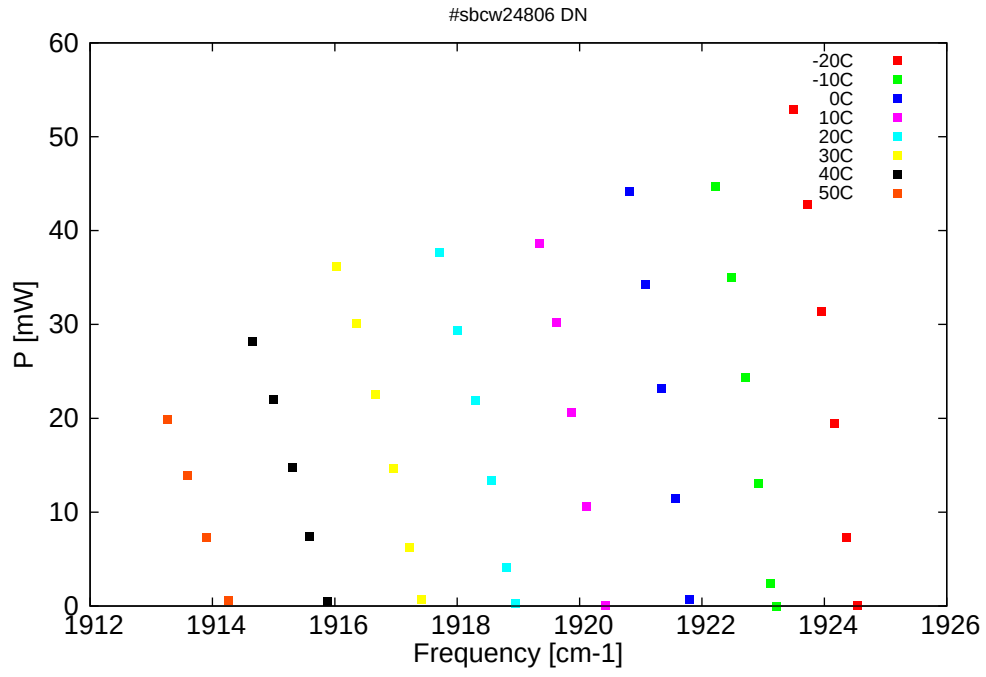


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

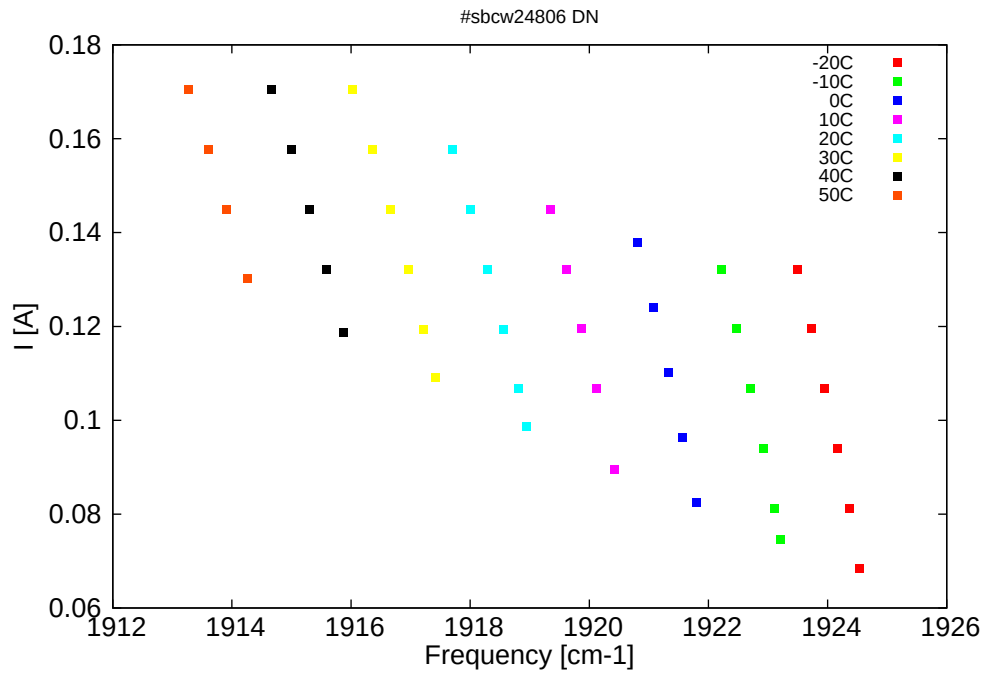


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5196	1924.5	0	-20	7.54	0.069
5196.5	1924.4	7.3	-20	7.68	0.081
5197.1	1924.2	19.4	-20	7.82	0.094
5197.6	1923.9	31.4	-20	7.96	0.107
5198.2	1923.7	42.8	-20	8.1	0.12
5198.9	1923.5	52.9	-20	8.25	0.132
5199.6	1923.2	0	-10	7.56	0.075
5199.9	1923.1	2.4	-10	7.63	0.081
5200.4	1922.9	13	-10	7.77	0.094
5201	1922.7	24.4	-10	7.91	0.107
5201.6	1922.5	35	-10	8.06	0.12
5202.3	1922.2	44.7	-10	8.2	0.132
5203.4	1921.8	0.7	0	7.61	0.083
5204.1	1921.6	11.5	0	7.75	0.096
5204.7	1921.3	23.2	0	7.91	0.11
5205.4	1921.1	34.3	0	8.07	0.124
5206.1	1920.8	44.1	0	8.22	0.138
5207.2	1920.4	0.1	10	7.64	0.09
5208	1920.1	10.6	10	7.82	0.107
5208.7	1919.9	20.6	10	7.97	0.12
5209.4	1919.6	30.2	10	8.11	0.132
5210.1	1919.3	38.7	10	8.26	0.145
5211.2	1919	0.2	20	7.7	0.099
5211.6	1918.8	4.1	20	7.78	0.107
5212.2	1918.6	13.4	20	7.92	0.119
5213	1918.3	21.9	20	8.06	0.132
5213.8	1918	29.4	20	8.21	0.145
5214.6	1917.7	37.6	20	8.36	0.158
5215.3	1917.4	0.7	30	7.77	0.109
5215.9	1917.2	6.2	30	7.88	0.119
5216.6	1917	14.7	30	8.02	0.132
5217.4	1916.7	22.5	30	8.16	0.145
5218.2	1916.4	30.1	30	8.31	0.158
5219.2	1916	36.1	30	8.46	0.17
5219.5	1915.9	0.4	40	7.84	0.119
5220.3	1915.6	7.4	40	7.98	0.132
5221.1	1915.3	14.8	40	8.12	0.145
5221.9	1915	22	40	8.27	0.158
5222.9	1914.7	28.2	40	8.42	0.17
5224	1914.3	0.6	50	7.93	0.13
5224.9	1913.9	7.3	50	8.08	0.145
5225.8	1913.6	13.9	50	8.23	0.158
5226.7	1913.3	19.9	50	8.37	0.17

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

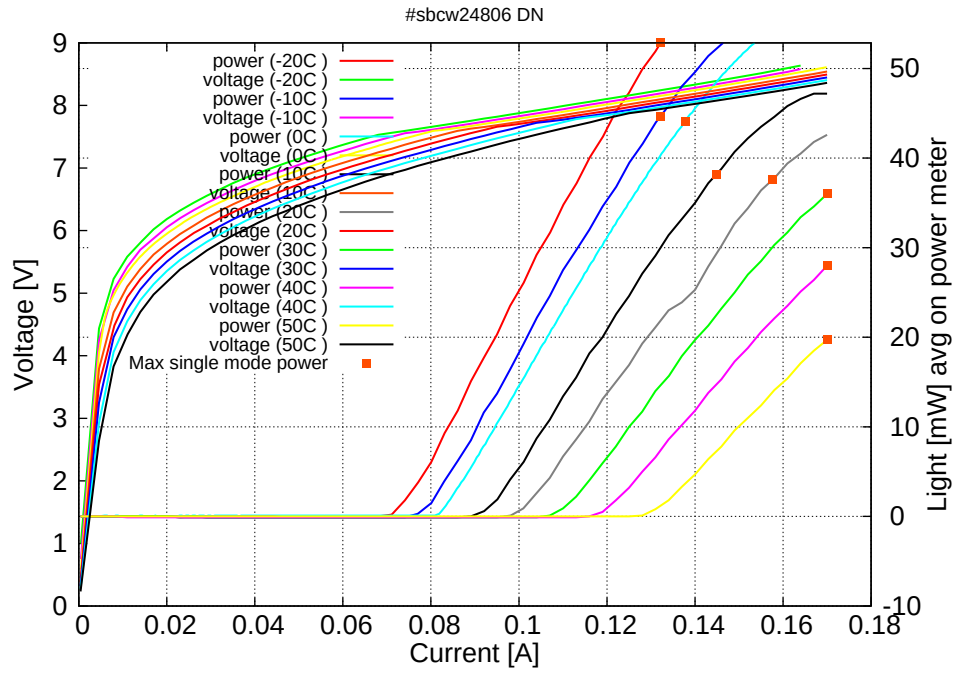


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.135A between -20C and -10C, 0.145A between 0C and 10C, 0.16A at 20C, 0.17A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

