

Datasheet for #sbcw18667 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.

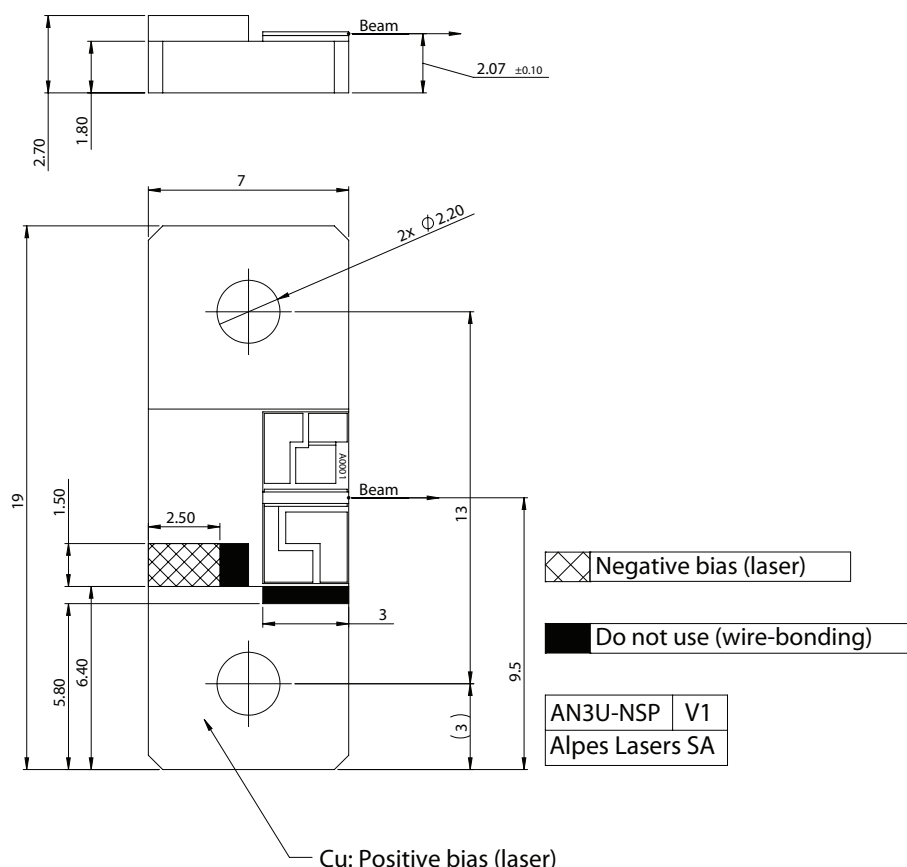


Figure 1: Mechanical and electrical interface for #sbcw18667 DN

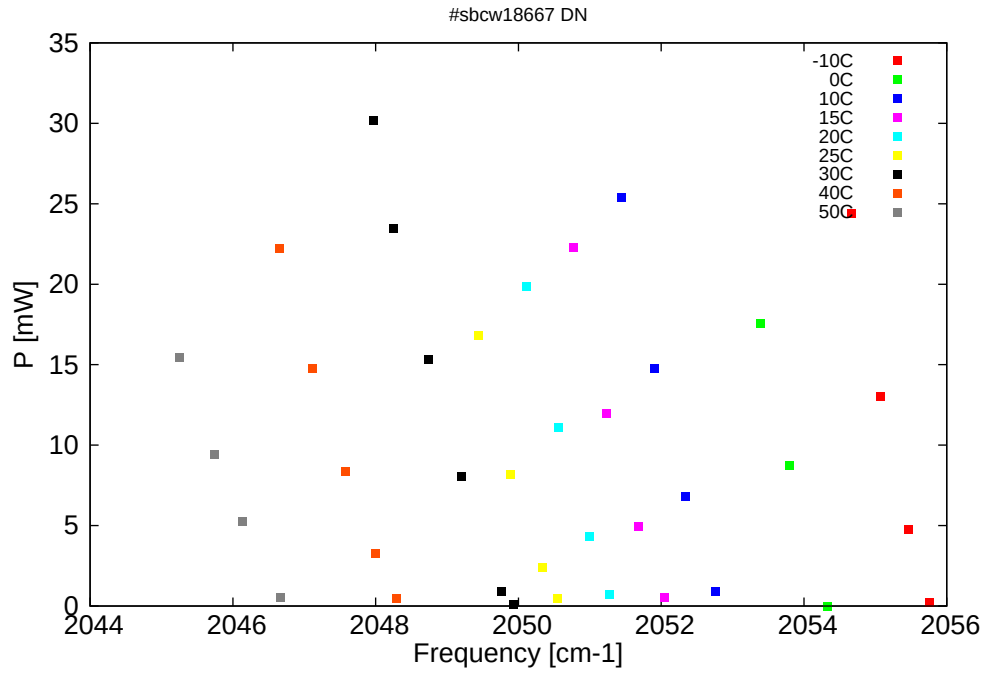


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

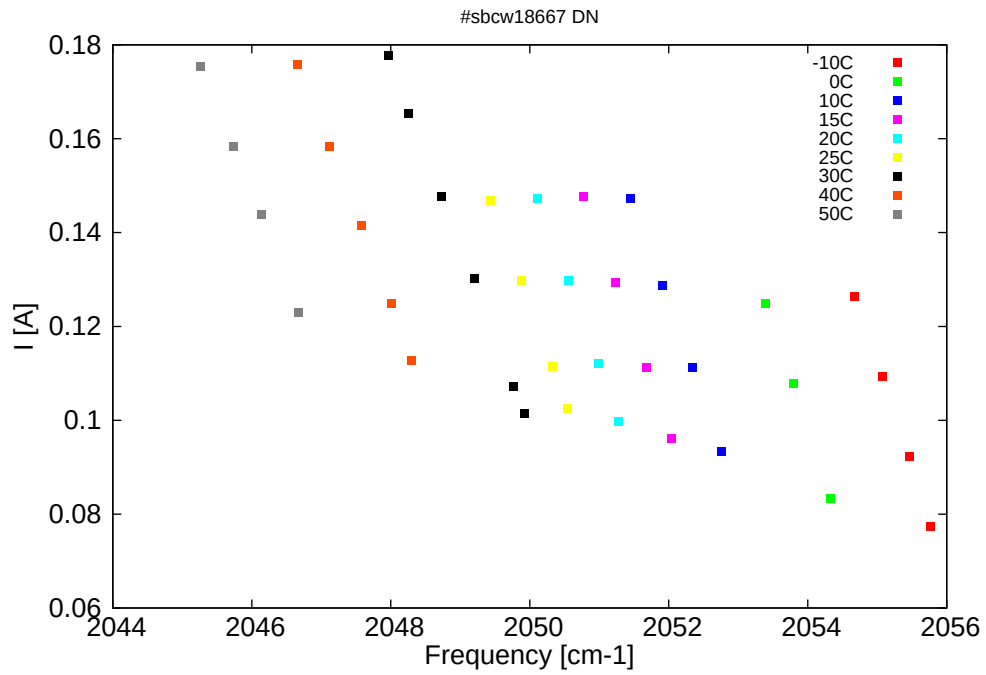


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4864.4	2055.8	0.2	-10	11	0.08
4865.1	2055.5	4.7	-10	11.3	0.09
4866	2055.1	13	-10	11.6	0.11
4867	2054.7	24.4	-10	11.9	0.13
4867.8	2054.3	0	0	11	0.08
4869	2053.8	8.7	0	11.4	0.11
4870	2053.4	17.6	0	11.7	0.12
4871.5	2052.8	0.9	10	11.1	0.09
4872.5	2052.3	6.8	10	11.4	0.11
4873.5	2051.9	14.8	10	11.7	0.13
4874.6	2051.5	25.4	10	12	0.15
4873.2	2052	0.6	15	11.1	0.1
4874.1	2051.7	5	15	11.3	0.11
4875.1	2051.2	12	15	11.6	0.13
4876.2	2050.8	22.3	15	11.9	0.15
4875	2051.3	0.7	20	11.1	0.1
4875.7	2051	4.3	20	11.3	0.11
4876.7	2050.6	11.1	20	11.6	0.13
4877.8	2050.1	19.8	20	11.9	0.15
4876.7	2050.5	0.4	25	11.1	0.1
4877.3	2050.3	2.4	25	11.2	0.11
4878.3	2049.9	8.2	25	11.5	0.13
4879.4	2049.4	16.8	25	11.8	0.15
4878.2	2049.9	0.1	30	11	0.1
4878.6	2049.8	0.9	30	11.1	0.11
4880	2049.2	8.1	30	11.5	0.13
4881.1	2048.7	15.3	30	11.8	0.15
4882.2	2048.3	23.4	30	12	0.17
4882.9	2048	30.2	30	12.2	0.18
4882.1	2048.3	0.5	40	11.1	0.11
4882.8	2048	3.3	40	11.3	0.12
4883.8	2047.6	8.4	40	11.5	0.14
4884.9	2047.1	14.8	40	11.8	0.16
4886	2046.7	22.2	40	12	0.18
4886	2046.7	0.5	50	11.2	0.12
4887.3	2046.1	5.3	50	11.5	0.14
4888.2	2045.7	9.4	50	11.7	0.16
4889.4	2045.3	15.5	50	11.9	0.18

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

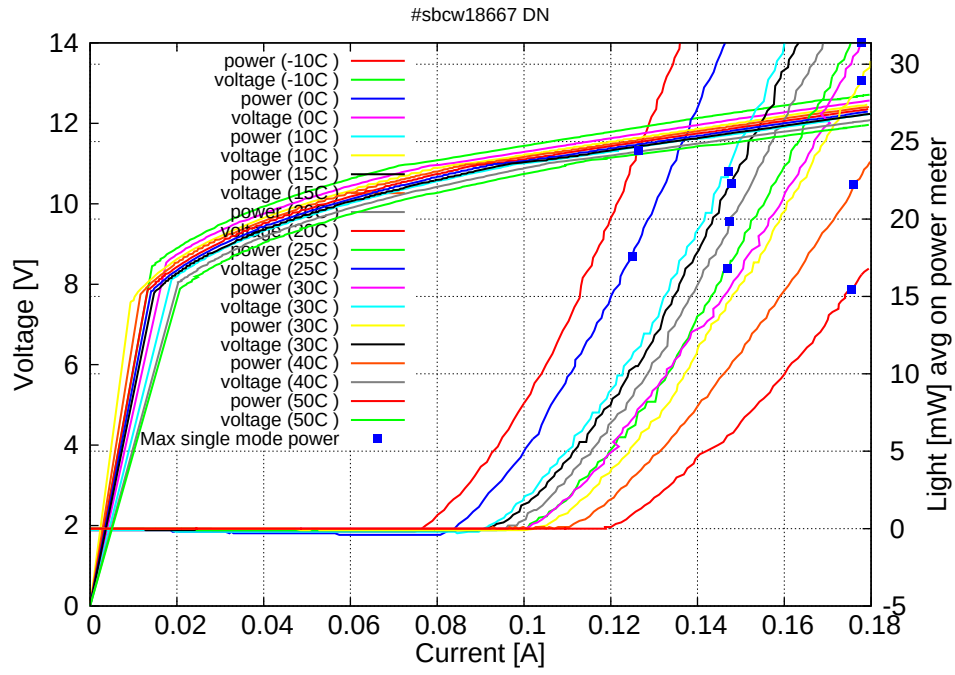


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.077A$ / $V_{th}=11.0V$ (2-wires measurements). Maximum operation current: 0.13A between -10C and 0C, 0.15A between 10C and 25C, 0.18A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

