

Datasheet for #sbcw25939 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.

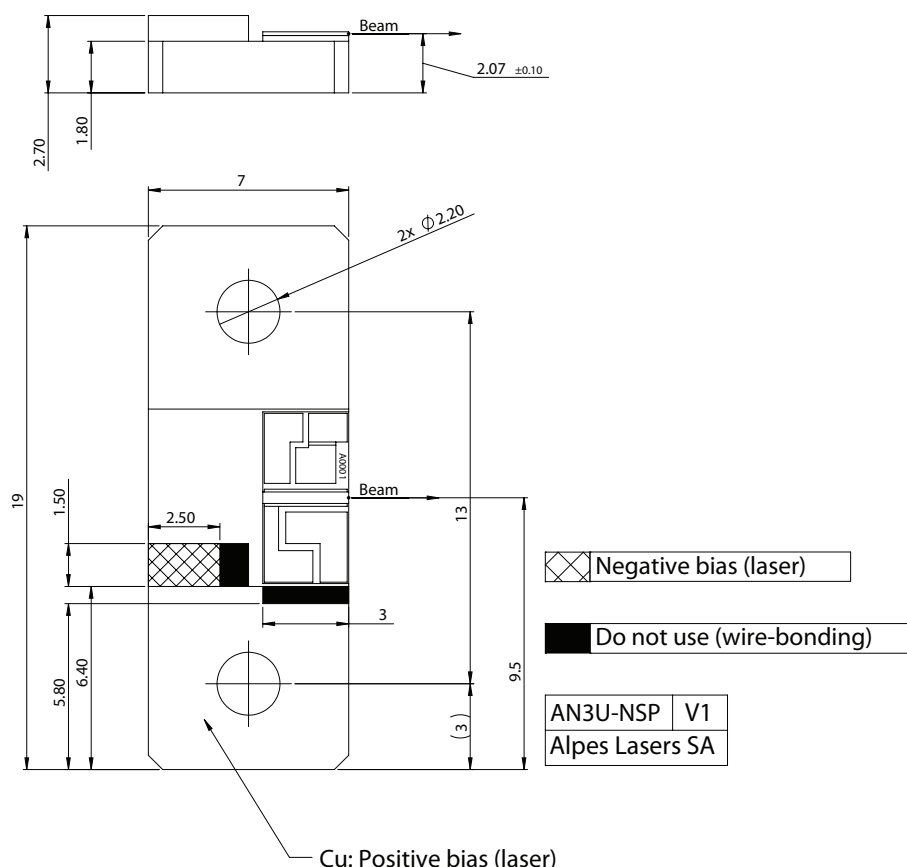


Figure 1: Mechanical and electrical interface for #sbcw25939 DN

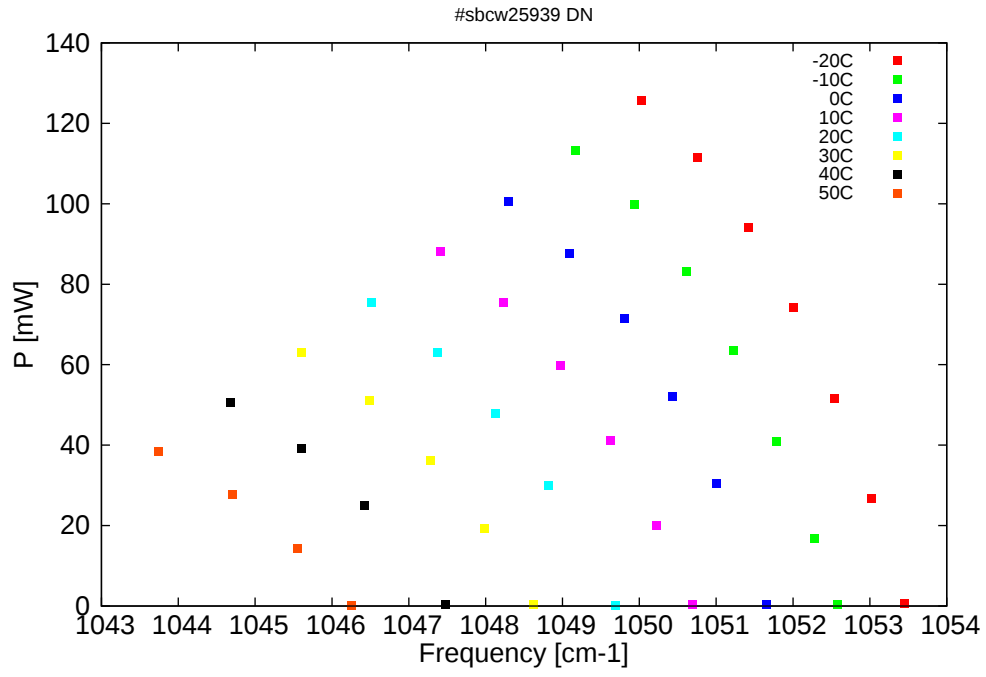


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

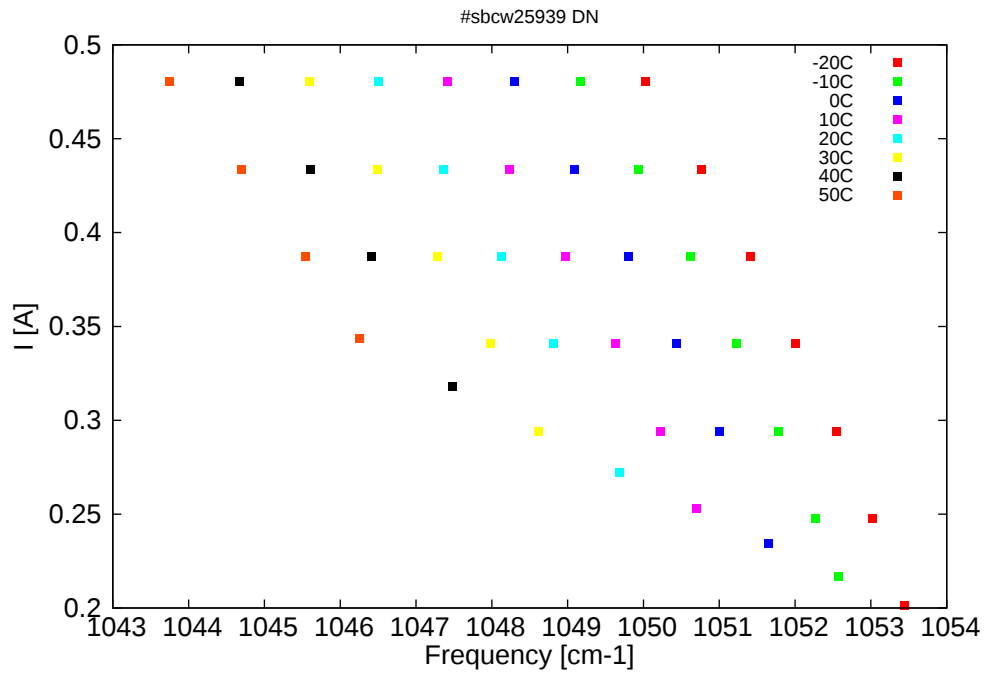


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
9492.7	1053.4	0.7	-20	9.18	0.201
9496.5	1053	26.6	-20	9.62	0.248
9500.8	1052.5	51.5	-20	10.04	0.294
9505.6	1052	74.2	-20	10.44	0.341
9511	1051.4	94.2	-20	10.83	0.387
9516.9	1050.8	111.6	-20	11.22	0.434
9523.6	1050	125.7	-20	11.62	0.48
9500.5	1052.6	0.4	-10	9.25	0.217
9503.2	1052.3	16.7	-10	9.54	0.248
9507.7	1051.8	40.9	-10	9.96	0.294
9512.7	1051.2	63.5	-10	10.37	0.341
9518.2	1050.6	83.1	-10	10.77	0.387
9524.4	1049.9	99.8	-10	11.17	0.434
9531.4	1049.2	113.2	-10	11.57	0.48
9508.9	1051.7	0.4	0	9.35	0.235
9514.7	1051	30.5	0	9.89	0.294
9519.9	1050.4	52.2	0	10.3	0.341
9525.6	1049.8	71.5	0	10.71	0.387
9532	1049.1	87.7	0	11.11	0.434
9539.2	1048.3	100.5	0	11.51	0.48
9517.5	1050.7	0.4	10	9.44	0.253
9521.8	1050.2	20	10	9.82	0.294
9527.2	1049.6	41.1	10	10.24	0.341
9533.1	1049	59.7	10	10.65	0.387
9539.8	1048.2	75.3	10	11.05	0.434
9547.3	1047.4	88.1	10	11.47	0.48
9526.6	1049.7	0.1	20	9.55	0.272
9534.6	1048.8	29.9	20	10.17	0.341
9540.8	1048.1	47.8	20	10.59	0.387
9547.7	1047.4	63	20	11	0.434
9555.6	1046.5	75.5	20	11.42	0.48
9536.3	1048.6	0.3	30	9.69	0.294
9542.1	1048	19.2	30	10.12	0.341
9548.5	1047.3	36.3	30	10.54	0.387
9555.8	1046.5	51	30	10.95	0.434
9563.9	1045.6	63	30	11.37	0.48
9546.7	1047.5	0.3	40	9.85	0.318
9556.4	1046.4	25	40	10.48	0.387
9563.9	1045.6	39.2	40	10.9	0.434
9572.3	1044.7	50.5	40	11.33	0.48
9557.9	1046.3	0.2	50	10.03	0.344
9564.4	1045.5	14.3	50	10.43	0.387
9572.1	1044.7	27.8	50	10.85	0.434
9580.9	1043.7	38.3	50	11.29	0.48

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

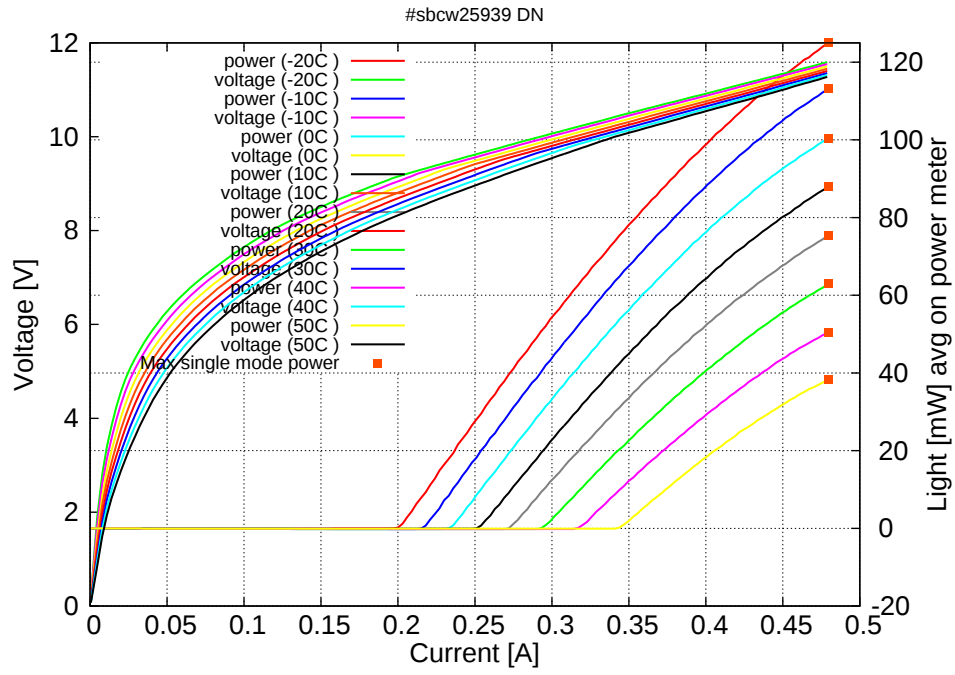


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.20A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.48A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

