

Datasheet for #sbcw26127 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 bias and positive bias on the specific zones drawn below. 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.

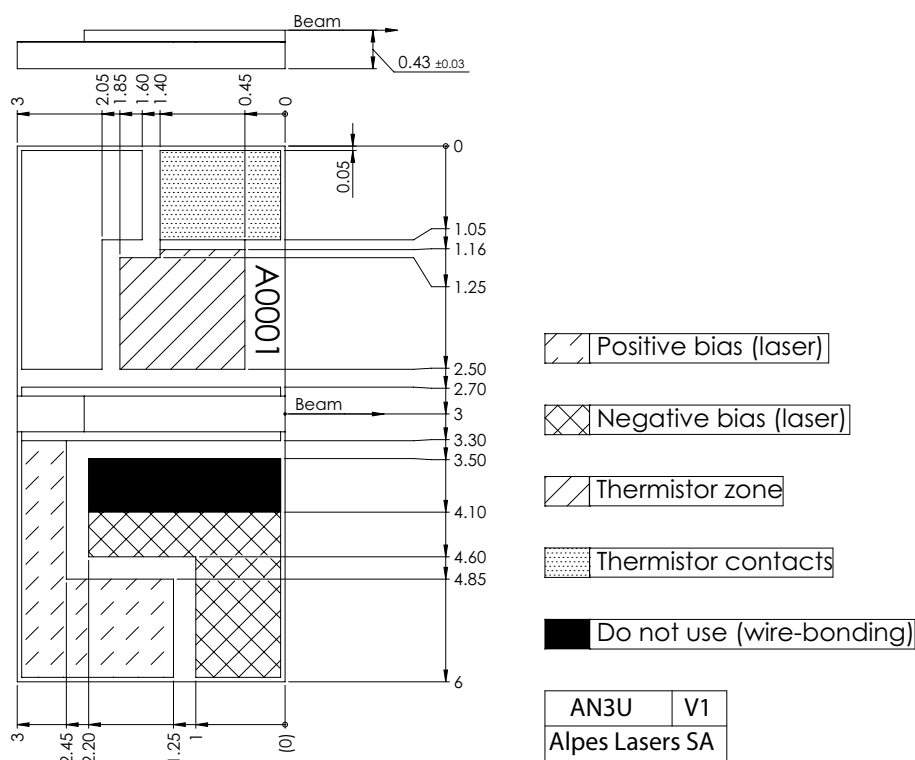


Figure 1: Mechanical and electrical interface for #sbcw26127 DN (please note that AlN submount numbering is A0W5P)

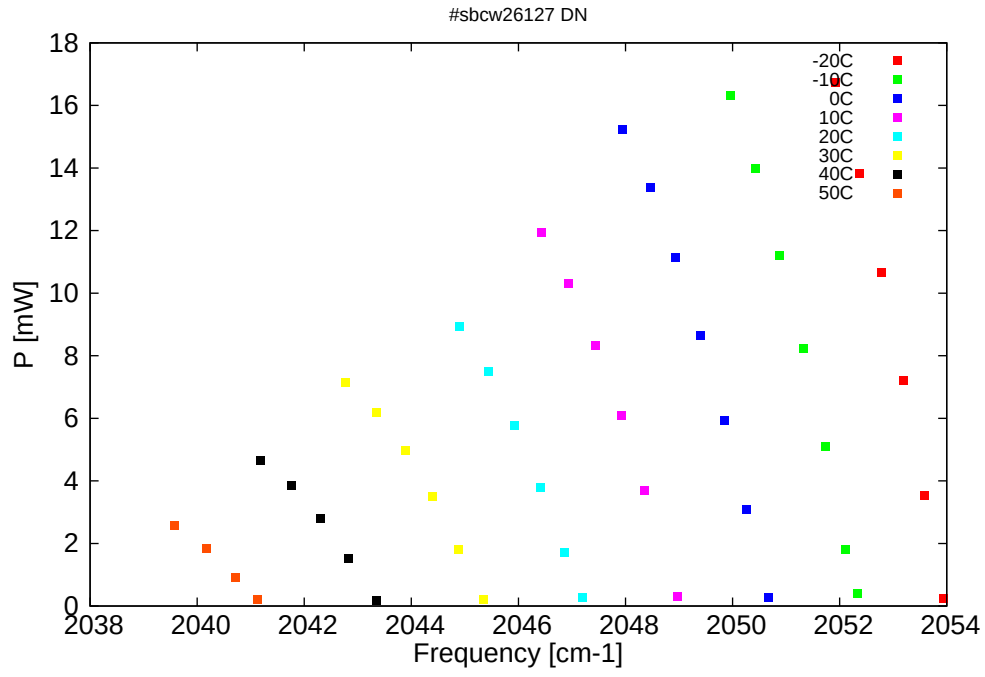


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

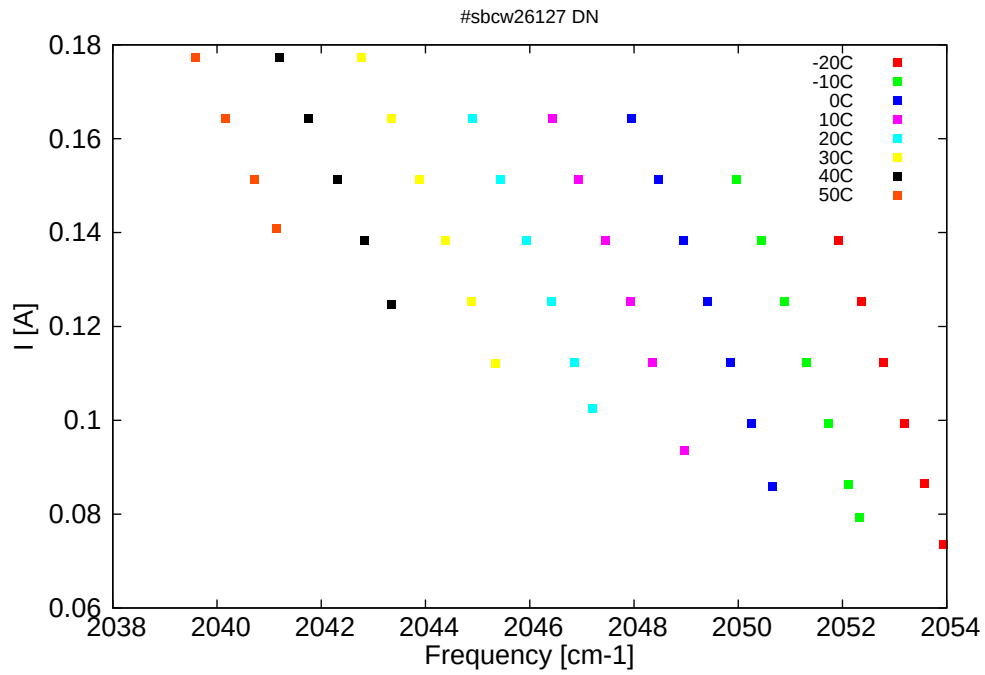


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4868.7	2053.9	0.2	-20	11.67	0.074
4869.5	2053.6	3.5	-20	11.99	0.087
4870.5	2053.2	7.2	-20	12.31	0.099
4871.4	2052.8	10.7	-20	12.62	0.112
4872.4	2052.4	13.8	-20	12.93	0.125
4873.5	2051.9	16.7	-20	13.25	0.138
4872.5	2052.3	0.4	-10	11.66	0.079
4873	2052.1	1.8	-10	11.82	0.086
4873.9	2051.7	5.1	-10	12.13	0.099
4874.9	2051.3	8.2	-10	12.43	0.112
4876	2050.9	11.2	-10	12.73	0.125
4877	2050.4	14	-10	13.04	0.138
4878.1	2050	16.3	-10	13.33	0.151
4876.5	2050.7	0.3	0	11.52	0.086
4877.4	2050.3	3.1	0	11.81	0.099
4878.4	2049.8	5.9	0	12.07	0.112
4879.5	2049.4	8.6	0	12.34	0.125
4880.6	2048.9	11.2	0	12.6	0.138
4881.7	2048.5	13.4	0	12.88	0.151
4882.9	2047.9	15.2	0	13.15	0.164
4880.5	2049	0.3	10	11.53	0.094
4882	2048.4	3.7	10	11.91	0.112
4883	2047.9	6.1	10	12.16	0.125
4884.1	2047.4	8.3	10	12.41	0.138
4885.3	2046.9	10.3	10	12.67	0.151
4886.5	2046.4	11.9	10	12.94	0.164
4884.7	2047.2	0.3	20	11.6	0.103
4885.5	2046.9	1.7	20	11.79	0.112
4886.6	2046.4	3.8	20	12.03	0.125
4887.7	2045.9	5.8	20	12.28	0.138
4888.9	2045.4	7.5	20	12.53	0.151
4890.2	2044.9	8.9	20	12.78	0.164
4889.2	2045.3	0.2	30	11.7	0.112
4890.3	2044.9	1.8	30	11.94	0.125
4891.4	2044.4	3.5	30	12.18	0.138
4892.6	2043.9	5	30	12.42	0.151
4893.9	2043.3	6.2	30	12.67	0.164
4895.3	2042.8	7.1	30	12.92	0.177
4893.9	2043.3	0.2	40	11.86	0.125
4895.2	2042.8	1.5	40	12.1	0.138
4896.4	2042.3	2.8	40	12.34	0.151
4897.7	2041.8	3.8	40	12.57	0.164
4899.1	2041.2	4.7	40	12.82	0.177
4899.2	2041.1	0.2	50	12.06	0.141
4900.2	2040.7	0.9	50	12.25	0.151
4901.6	2040.2	1.9	50	12.48	0.164
4903	2039.6	2.6	50	12.71	0.177

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$\lambda[\text{nm}]$ $\nu[\text{cm}^{-1}]$ $P[\text{mW}]$ $\text{Temp}[\text{°C}]$ $U_{LASER}[\text{V}]$ $I[\text{A}]$
 Table 1: Singlemode optical output power as function of operating parameters.

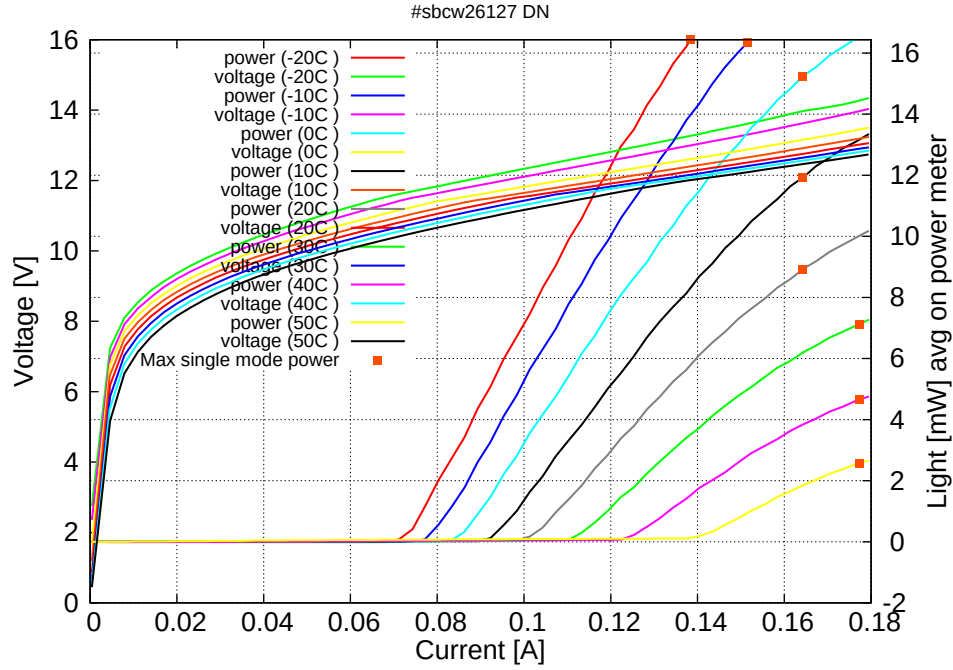


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.07\text{A}$ / $V_{th}=11.6\text{V}$ (2-wires measurements). Maximum operation current: 0.15A between -20°C and -10°C, 0.165A between 0°C and 20°C, 0.18A between 30°C and 50°C.

Figure 3: spectra at different temperatures for various DC currents

