

Datasheet for #sbcw26131 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.

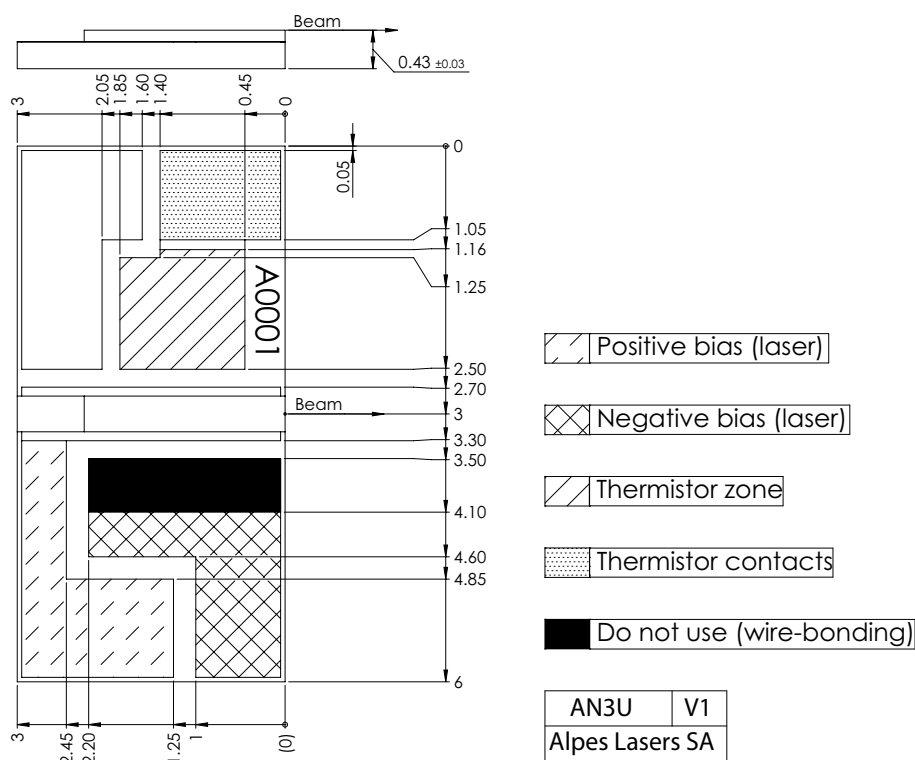


Figure 1: Mechanical and electrical interface for #sbcw26131 DN (please note that AlN submount numbering is A0W54)

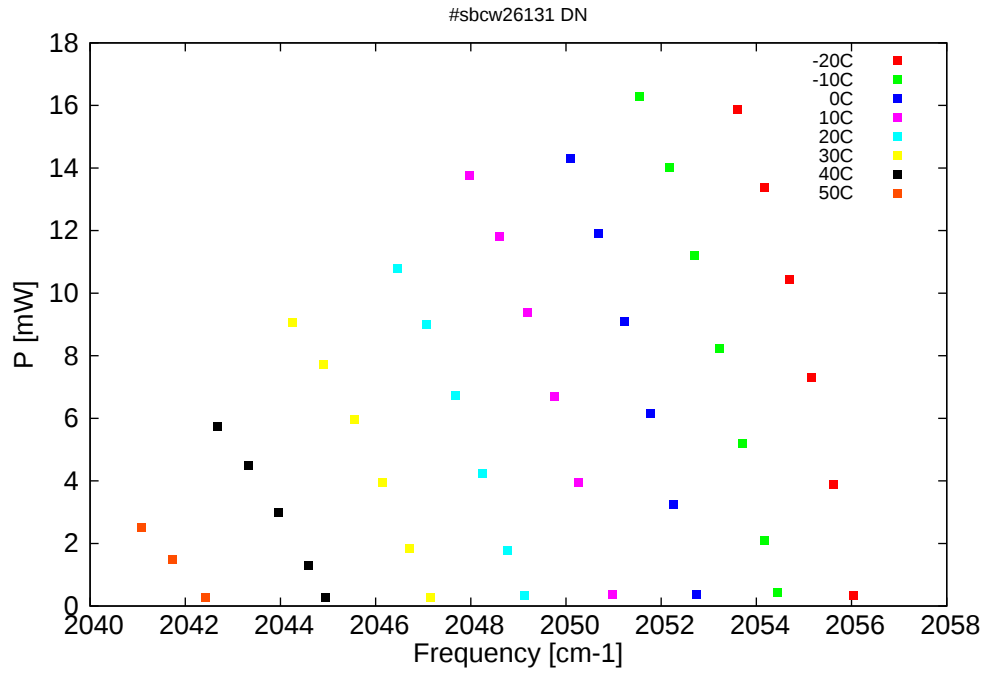


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

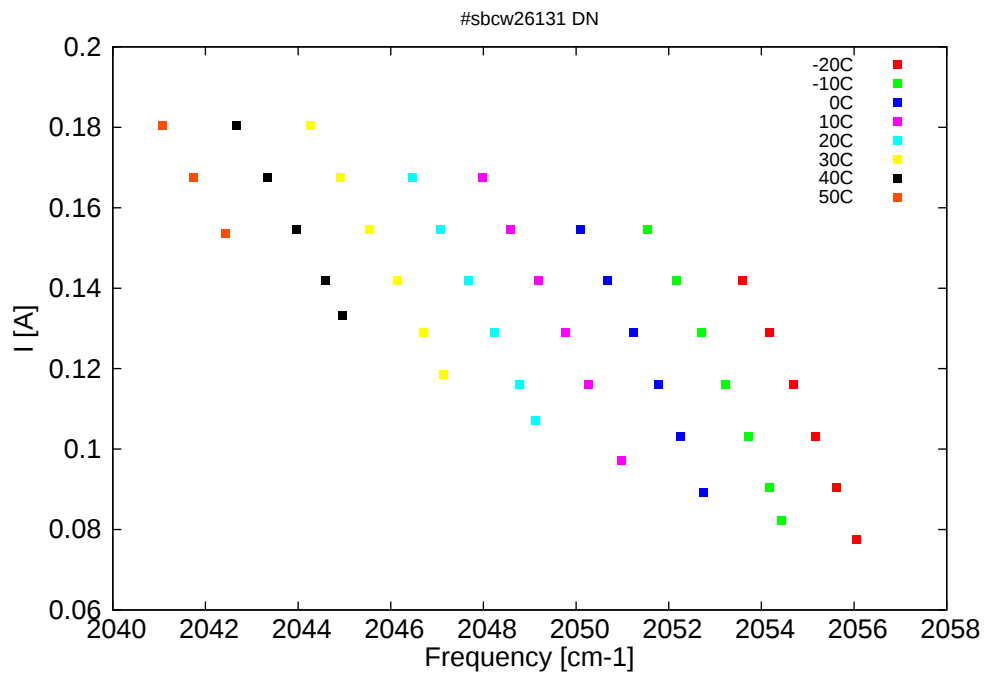


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4863.7	2056	0.3	-20	12.07	0.078
4864.7	2055.6	3.9	-20	12.42	0.09
4865.8	2055.2	7.3	-20	12.77	0.103
4866.9	2054.7	10.4	-20	13.13	0.116
4868.1	2054.2	13.4	-20	13.5	0.129
4869.5	2053.6	15.9	-20	13.9	0.142
4867.5	2054.4	0.4	-10	12.02	0.082
4868.1	2054.2	2.1	-10	12.23	0.09
4869.2	2053.7	5.2	-10	12.57	0.103
4870.4	2053.2	8.2	-10	12.9	0.116
4871.6	2052.7	11.2	-10	13.25	0.129
4872.9	2052.2	14	-10	13.61	0.142
4874.4	2051.5	16.3	-10	14	0.155
4871.5	2052.7	0.4	0	12.04	0.089
4872.7	2052.3	3.2	0	12.39	0.103
4873.8	2051.8	6.2	0	12.7	0.116
4875.1	2051.2	9.1	0	13.02	0.129
4876.4	2050.7	11.9	0	13.36	0.142
4877.8	2050.1	14.3	0	13.71	0.155
4875.7	2051	0.4	10	12.1	0.097
4877.4	2050.3	3.9	10	12.54	0.116
4878.6	2049.8	6.7	10	12.84	0.129
4880	2049.2	9.4	10	13.16	0.142
4881.4	2048.6	11.8	10	13.48	0.155
4882.9	2048	13.8	10	13.82	0.168
4880.1	2049.1	0.3	20	12.2	0.107
4881	2048.8	1.8	20	12.39	0.116
4882.2	2048.2	4.2	20	12.68	0.129
4883.6	2047.7	6.7	20	12.98	0.142
4885	2047.1	9	20	13.28	0.155
4886.5	2046.5	10.8	20	13.59	0.168
4884.9	2047.1	0.3	30	12.34	0.119
4885.9	2046.7	1.8	30	12.55	0.129
4887.2	2046.1	3.9	30	12.83	0.142
4888.7	2045.6	6	30	13.12	0.155
4890.2	2044.9	7.7	30	13.41	0.168
4891.7	2044.3	9.1	30	13.71	0.181
4890.1	2044.9	0.3	40	12.54	0.133
4891	2044.6	1.3	40	12.71	0.142
4892.4	2044	3	40	12.98	0.155
4894	2043.3	4.5	40	13.26	0.168
4895.6	2042.7	5.7	40	13.54	0.181
4896.1	2042.4	0.3	50	12.84	0.154
4897.8	2041.7	1.5	50	13.12	0.168
4899.4	2041.1	2.5	50	13.38	0.181

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

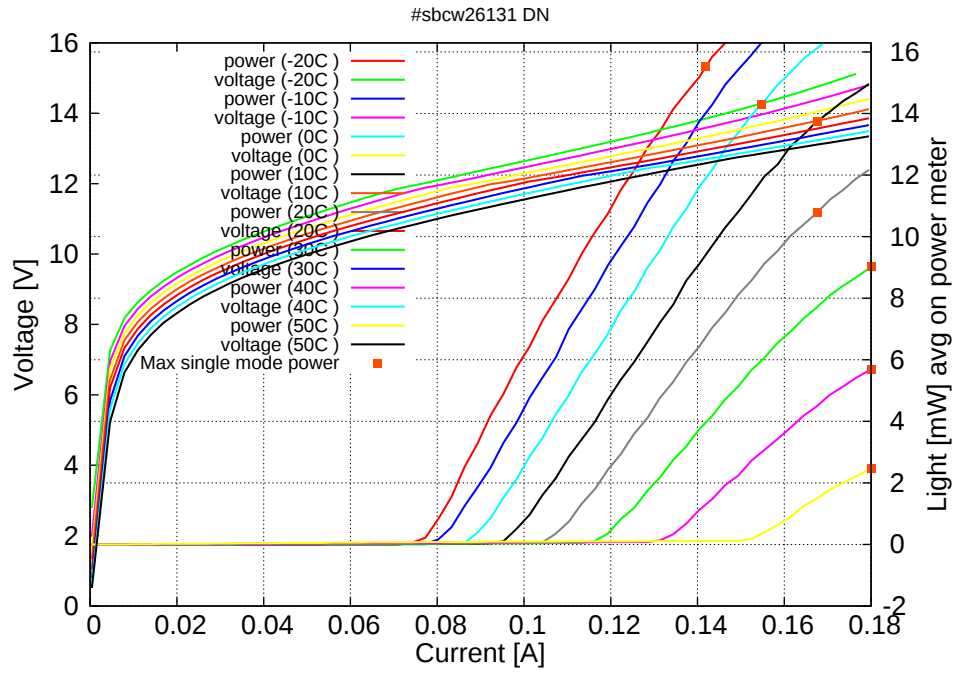


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=12.1V$ (2-wires measurements). Maximum operation current: 0.145A at -20C, 0.155A between -10C and 0C, 0.17A between 10C and 20C, 0.18A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

