

Datasheet for #sbcw26577 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.

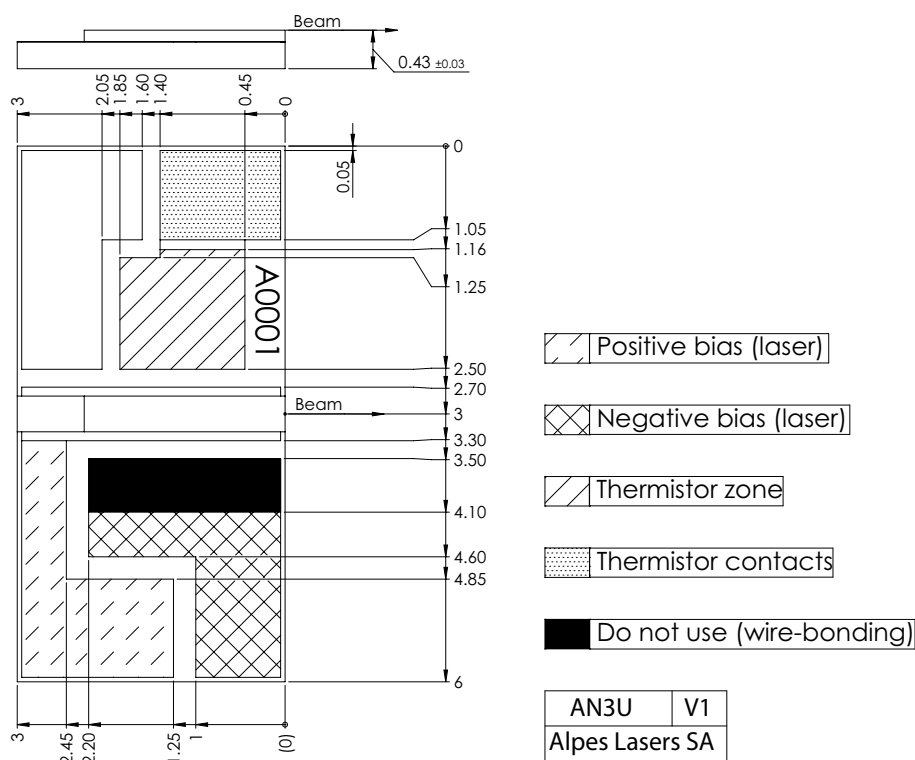


Figure 1: Mechanical and electrical interface for #sbcw26577 DN (please note that AlN submount numbering is A0U58)

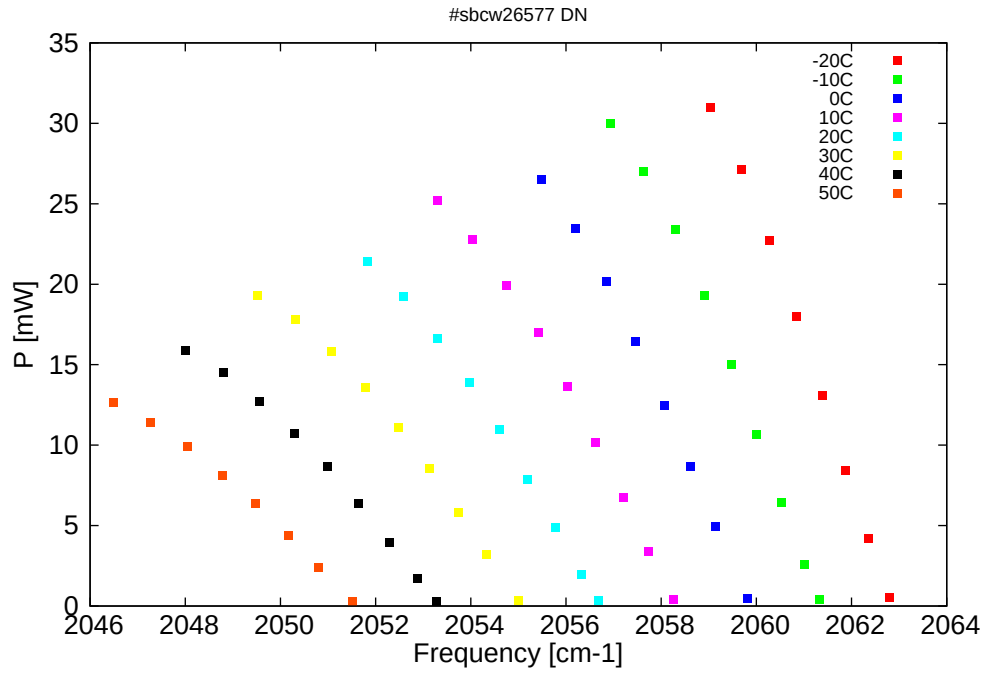


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

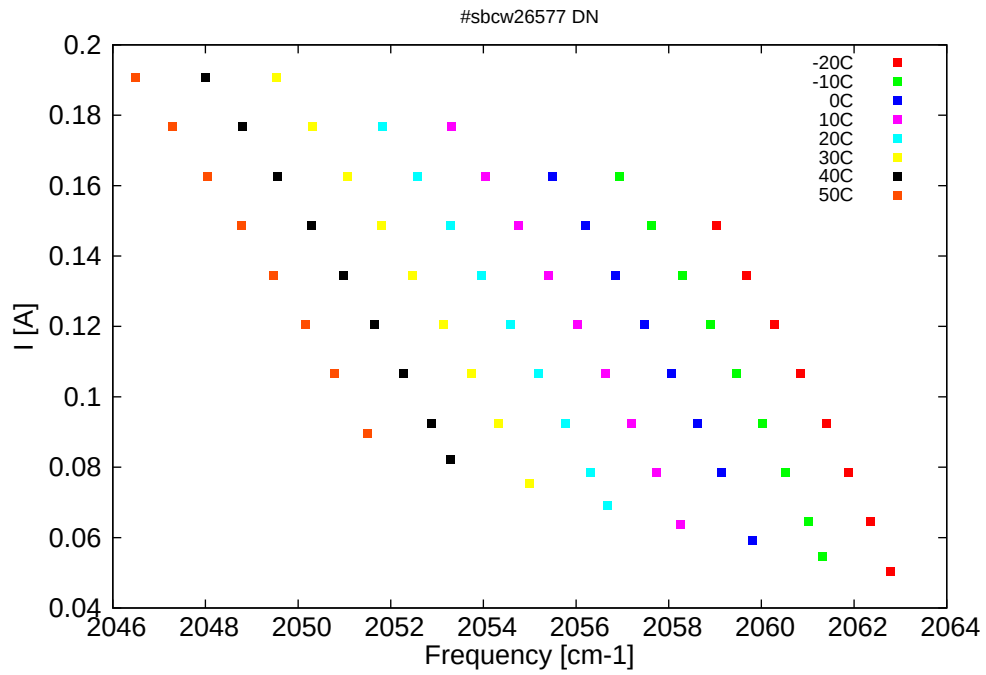


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4847.8	2062.8	0.5	-20	11.2	0.05
4848.8	2062.4	4.2	-20	11.61	0.065
4849.9	2061.9	8.4	-20	11.98	0.079
4851.1	2061.4	13.1	-20	12.33	0.093
4852.4	2060.8	18	-20	12.67	0.107
4853.7	2060.3	22.7	-20	13.01	0.121
4855.1	2059.7	27.1	-20	13.36	0.135
4856.6	2059	31	-20	13.75	0.149
4851.3	2061.3	0.4	-10	11.19	0.055
4852	2061	2.6	-10	11.47	0.065
4853.1	2060.5	6.4	-10	11.84	0.079
4854.3	2060	10.7	-10	12.18	0.093
4855.6	2059.5	15	-10	12.51	0.107
4857	2058.9	19.3	-10	12.84	0.121
4858.4	2058.3	23.4	-10	13.18	0.135
4860	2057.6	27	-10	13.54	0.149
4861.6	2056.9	30	-10	13.92	0.163
4854.8	2059.8	0.5	0	11.2	0.059
4856.4	2059.1	4.9	0	11.71	0.079
4857.6	2058.6	8.6	0	12.05	0.093
4858.9	2058.1	12.4	0	12.38	0.107
4860.3	2057.5	16.4	0	12.69	0.121
4861.8	2056.9	20.2	0	13.02	0.135
4863.3	2056.2	23.4	0	13.35	0.149
4865	2055.5	26.5	0	13.71	0.163
4858.5	2058.3	0.4	10	11.21	0.064
4859.7	2057.7	3.4	10	11.59	0.079
4861	2057.2	6.8	10	11.92	0.093
4862.3	2056.6	10.1	10	12.24	0.107
4863.7	2056	13.6	10	12.56	0.121
4865.2	2055.4	17	10	12.87	0.135
4866.8	2054.7	19.9	10	13.19	0.149
4868.4	2054	22.8	10	13.51	0.163
4870.2	2053.3	25.2	10	13.86	0.177
4862.2	2056.7	0.3	20	11.26	0.069
4863.1	2056.3	1.9	20	11.48	0.079
4864.3	2055.8	4.9	20	11.81	0.093
4865.7	2055.2	7.9	20	12.13	0.107
4867.1	2054.6	10.9	20	12.43	0.121
4868.6	2054	13.9	20	12.73	0.135
4870.2	2053.3	16.6	20	13.04	0.149
4871.9	2052.6	19.2	20	13.35	0.163
4873.7	2051.8	21.4	20	13.67	0.177
4866.2	2055	0.3	30	11.32	0.075
4867.8	2054.3	3.2	30	11.7	0.093
4869.2	2053.7	5.8	30	12.01	0.107
4870.6	2053.1	8.6	30	12.31	0.121
4872.2	2052.5	11.1	30	12.61	0.135
4873.8	2051.8	13.6	30	12.9	0.149

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4875.5	2051.1	15.8	30	13.2	0.163
4877.3	2050.3	17.8	30	13.5	0.177
4879.2	2049.5	19.3	30	13.81	0.191
4870.2	2053.3	0.3	40	11.38	0.082
4871.2	2052.9	1.7	40	11.61	0.093
4872.6	2052.3	4	40	11.91	0.107
4874.1	2051.6	6.4	40	12.2	0.121
4875.7	2051	8.6	40	12.49	0.135
4877.4	2050.3	10.7	40	12.78	0.149
4879.1	2049.6	12.7	40	13.06	0.163
4880.9	2048.8	14.5	40	13.34	0.177
4882.8	2048	15.9	40	13.63	0.191
4874.5	2051.5	0.3	50	11.47	0.09
4876.2	2050.8	2.4	50	11.81	0.107
4877.7	2050.2	4.4	50	12.09	0.121
4879.3	2049.5	6.4	50	12.37	0.135
4881	2048.8	8.1	50	12.64	0.149
4882.7	2048	9.9	50	12.91	0.163
4884.5	2047.3	11.4	50	13.19	0.177
4886.4	2046.5	12.6	50	13.45	0.191

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

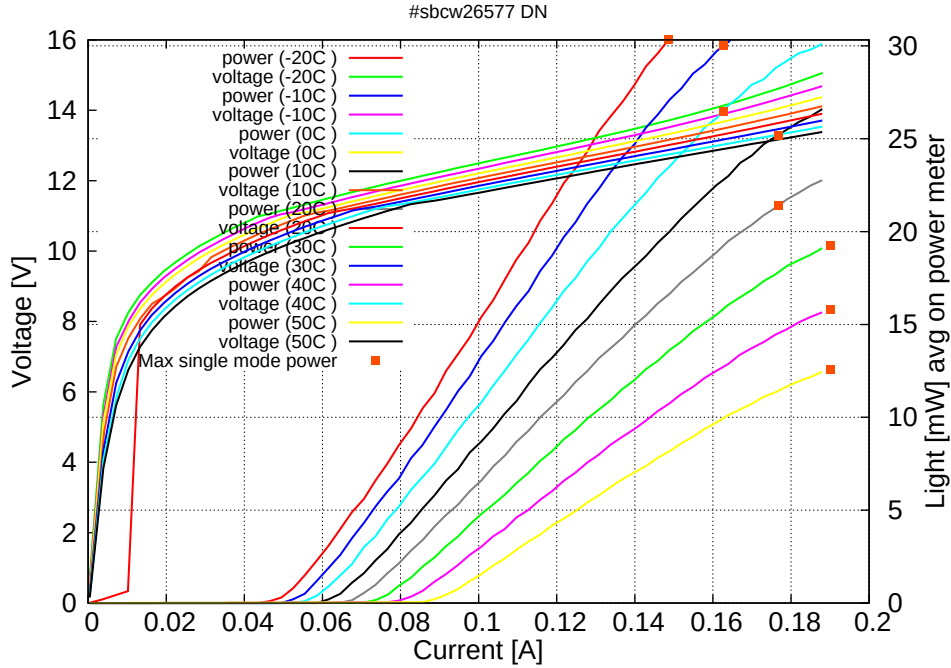


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.05A$ / $V_{th}=11.1V$ (2-wires measurements). Maximum operation current: 0.15A at -20°C, 0.165A between -10°C and 0°C, 0.18A between 10°C and 20°C,

0.19A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

