

Datasheet for #sbcw26579 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.

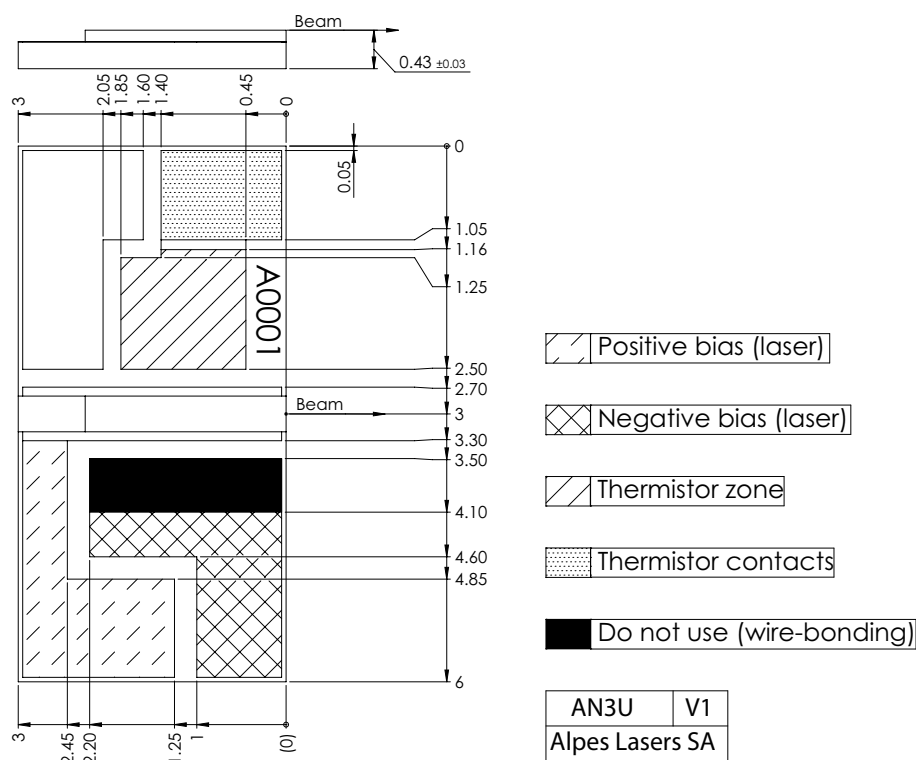


Figure 1: Mechanical and electrical interface for #sbcw26579 DN (please note that AlN submount numbering is A0U40)

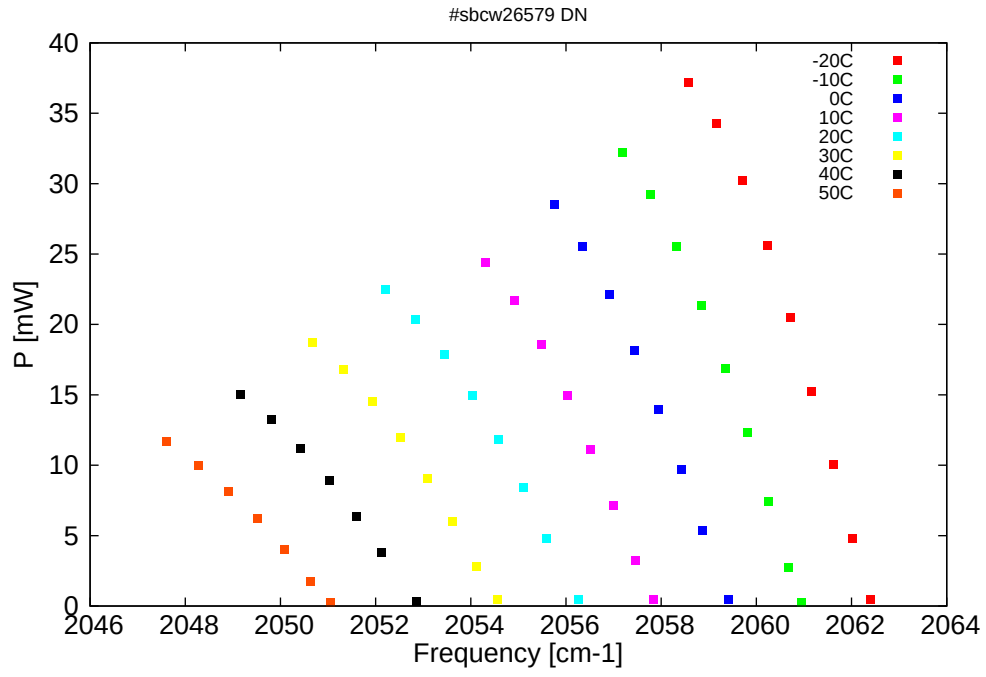


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

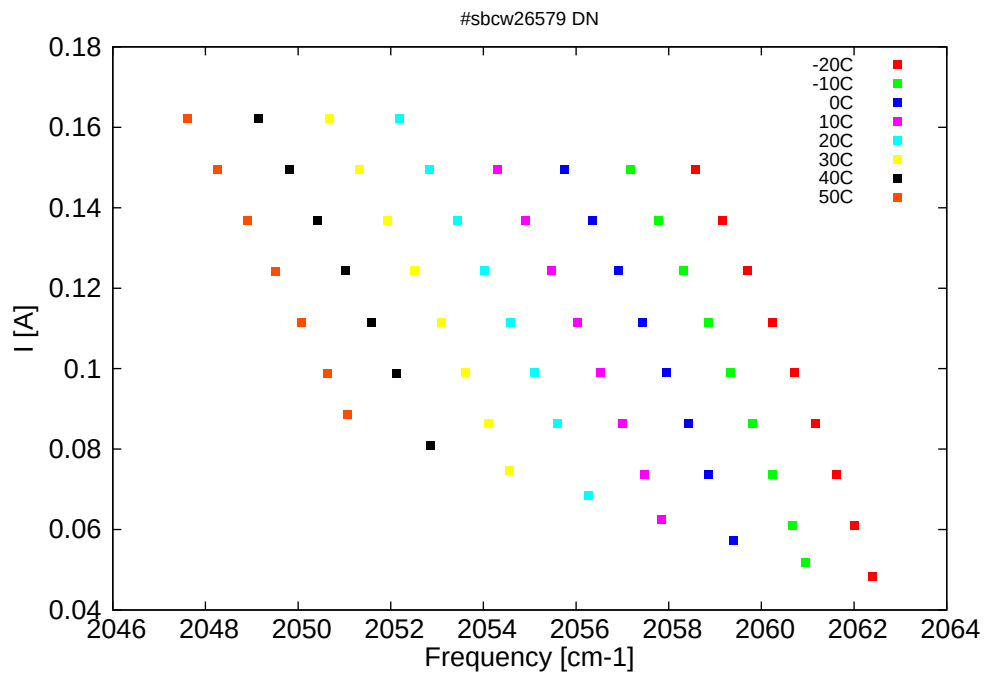


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4848.7	2062.4	0.4	-20	11.28	0.048
4849.6	2062	4.8	-20	11.64	0.061
4850.6	2061.6	10	-20	11.98	0.074
4851.6	2061.2	15.3	-20	12.3	0.086
4852.7	2060.7	20.5	-20	12.61	0.099
4853.8	2060.2	25.6	-20	12.92	0.112
4855.1	2059.7	30.2	-20	13.24	0.124
4856.3	2059.2	34.3	-20	13.57	0.137
4857.7	2058.6	37.2	-20	13.94	0.15
4852.1	2060.9	0.3	-10	11.27	0.052
4852.8	2060.7	2.7	-10	11.51	0.061
4853.8	2060.2	7.4	-10	11.84	0.074
4854.8	2059.8	12.3	-10	12.15	0.086
4855.9	2059.3	16.9	-10	12.46	0.099
4857.1	2058.9	21.3	-10	12.75	0.112
4858.3	2058.3	25.5	-10	13.06	0.124
4859.6	2057.8	29.2	-10	13.37	0.137
4861	2057.2	32.2	-10	13.71	0.15
4855.8	2059.4	0.5	0	11.3	0.057
4857	2058.9	5.3	0	11.71	0.074
4858.1	2058.4	9.7	0	12.02	0.086
4859.2	2057.9	13.9	0	12.32	0.099
4860.4	2057.4	18.2	0	12.61	0.112
4861.6	2056.9	22.1	0	12.9	0.124
4863	2056.3	25.5	0	13.2	0.137
4864.4	2055.8	28.5	0	13.5	0.15
4859.5	2057.8	0.4	10	11.33	0.063
4860.3	2057.5	3.2	10	11.59	0.074
4861.4	2057	7.1	10	11.89	0.086
4862.6	2056.5	11.1	10	12.18	0.099
4863.8	2056	14.9	10	12.47	0.112
4865	2055.5	18.5	10	12.75	0.124
4866.4	2054.9	21.7	10	13.04	0.137
4867.8	2054.3	24.4	10	13.33	0.15
4863.2	2056.3	0.5	20	11.37	0.068
4864.8	2055.6	4.8	20	11.78	0.086
4865.9	2055.1	8.4	20	12.06	0.099
4867.2	2054.6	11.8	20	12.34	0.112
4868.5	2054	15	20	12.62	0.124
4869.9	2053.4	17.9	20	12.89	0.137
4871.3	2052.8	20.4	20	13.17	0.15
4872.8	2052.2	22.5	20	13.46	0.162
4867.2	2054.6	0.4	30	11.42	0.075
4868.3	2054.1	2.8	30	11.68	0.086
4869.4	2053.6	6	30	11.96	0.099
4870.7	2053.1	9.1	30	12.23	0.112
4872.1	2052.5	12	30	12.5	0.124
4873.5	2051.9	14.5	30	12.76	0.137
4874.9	2051.3	16.8	30	13.03	0.15

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4876.4	2050.7	18.7	30	13.3	0.162
4871.3	2052.8	0.3	40	11.48	0.081
4873	2052.1	3.8	40	11.86	0.099
4874.3	2051.6	6.3	40	12.12	0.112
4875.6	2051	8.9	40	12.38	0.124
4877	2050.4	11.2	40	12.64	0.137
4878.5	2049.8	13.3	40	12.89	0.15
4880.1	2049.2	15	40	13.16	0.162
4875.5	2051.1	0.3	50	11.56	0.089
4876.5	2050.6	1.8	50	11.77	0.099
4877.9	2050.1	4	50	12.02	0.112
4879.2	2049.5	6.2	50	12.27	0.124
4880.7	2048.9	8.1	50	12.52	0.137
4882.2	2048.3	10	50	12.76	0.15
4883.7	2047.6	11.7	50	13.01	0.162

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

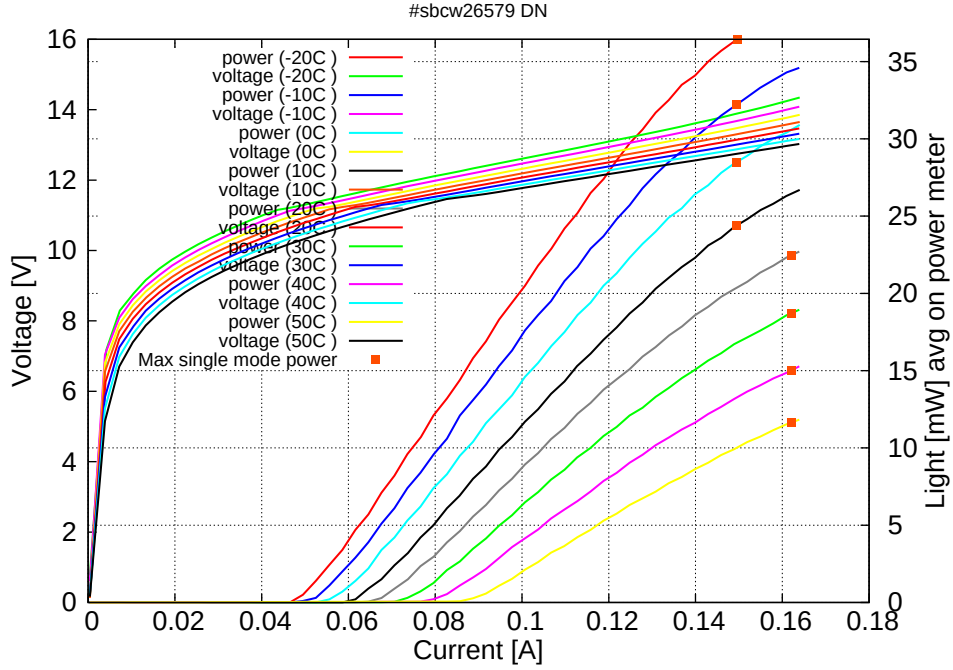


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=11.3V$ (2-wires measurements). Maximum operation current: 0.15A between -20C and 10C, 0.165A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

