

Datasheet for #sbcw26558 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.

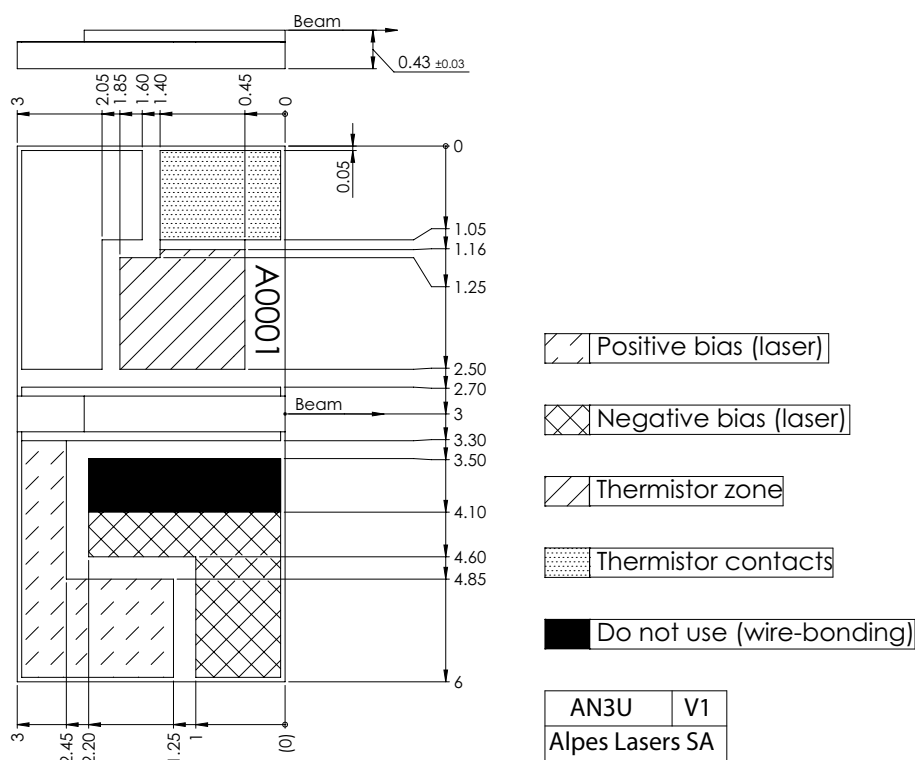


Figure 1: Mechanical and electrical interface for #sbcw26558 DN (please note that AlN submount numbering is A0W45)

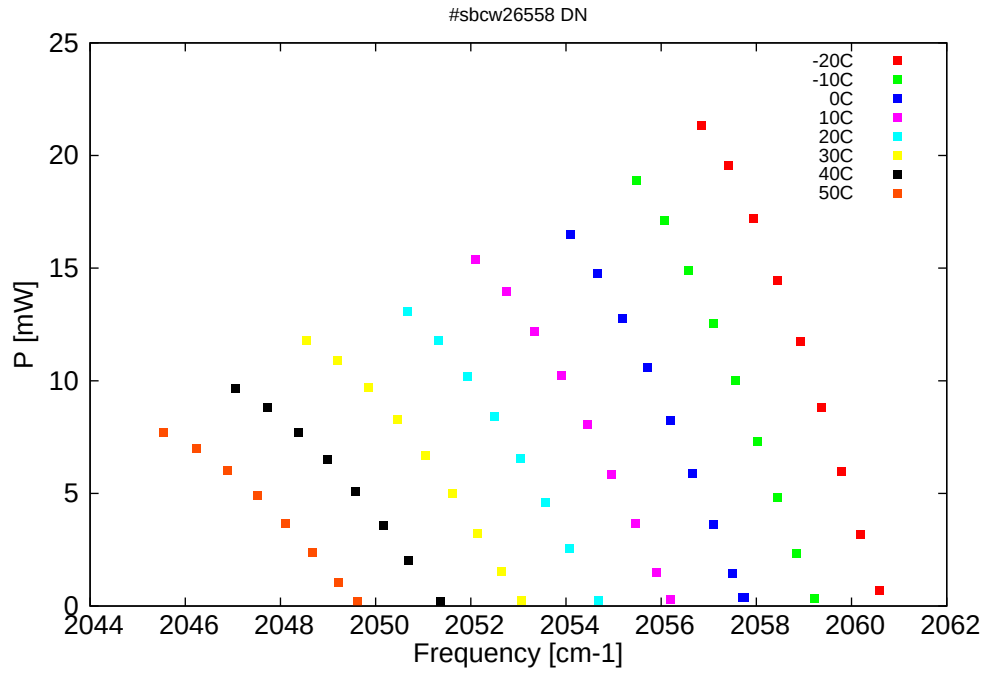


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

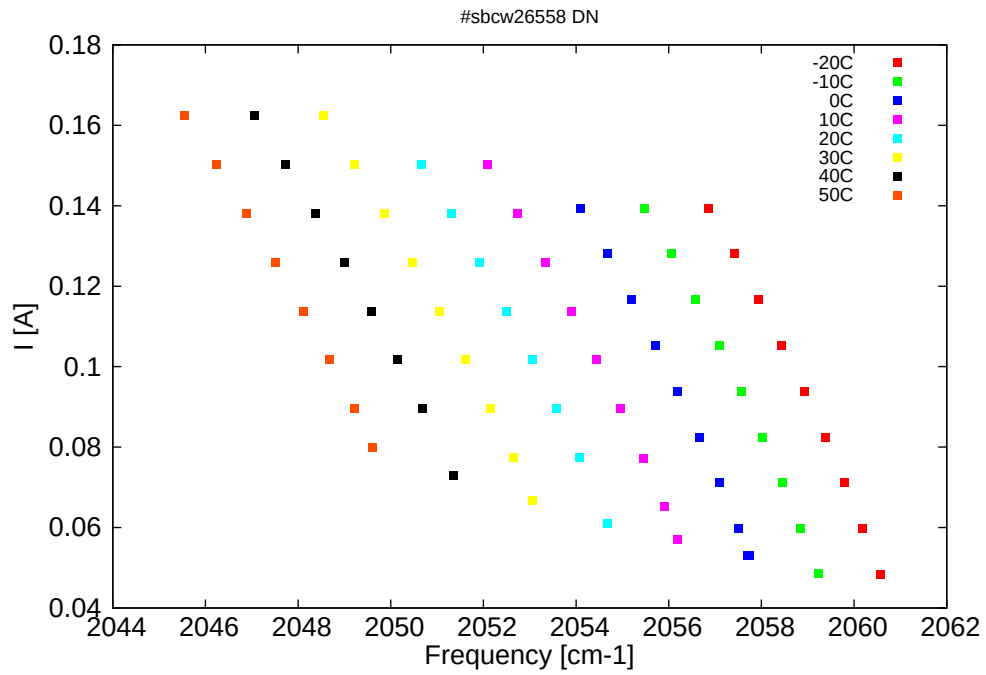


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4853	2060.6	0.7	-20	11.43	0.048
4853.9	2060.2	3.2	-20	11.8	0.06
4854.8	2059.8	6	-20	12.14	0.071
4855.8	2059.4	8.8	-20	12.47	0.083
4856.9	2058.9	11.7	-20	12.79	0.094
4858	2058.4	14.5	-20	13.11	0.105
4859.2	2057.9	17.2	-20	13.44	0.117
4860.5	2057.4	19.5	-20	13.8	0.128
4861.8	2056.9	21.3	-20	14.19	0.139
4856.2	2059.2	0.3	-10	11.29	0.049
4857.1	2058.9	2.3	-10	11.65	0.06
4858	2058.4	4.8	-10	11.99	0.071
4859.1	2058	7.3	-10	12.31	0.083
4860.1	2057.6	10	-10	12.62	0.094
4861.2	2057.1	12.5	-10	12.93	0.105
4862.4	2056.6	14.9	-10	13.24	0.117
4863.7	2056.1	17.1	-10	13.57	0.128
4865	2055.5	18.9	-10	13.92	0.139
4859.7	2057.7	0.4	0	11.31	0.053
4859.8	2057.7	0.4	0	11.3	0.053
4860.2	2057.5	1.4	0	11.51	0.06
4861.2	2057.1	3.6	0	11.84	0.071
4862.3	2056.7	5.9	0	12.16	0.083
4863.3	2056.2	8.3	0	12.46	0.094
4864.5	2055.7	10.6	0	12.75	0.105
4865.7	2055.2	12.8	0	13.06	0.117
4867	2054.7	14.8	0	13.36	0.128
4868.3	2054.1	16.5	0	13.68	0.139
4863.3	2056.2	0.3	10	11.3	0.057
4864	2055.9	1.5	10	11.54	0.065
4865.1	2055.5	3.6	10	11.88	0.077
4866.3	2055	5.8	10	12.2	0.09
4867.5	2054.4	8.1	10	12.51	0.102
4868.8	2053.9	10.2	10	12.81	0.114
4870.1	2053.3	12.2	10	13.12	0.126
4871.5	2052.7	13.9	10	13.44	0.138
4873.1	2052.1	15.4	10	13.78	0.15
4866.9	2054.7	0.2	20	11.32	0.061
4868.4	2054.1	2.5	20	11.75	0.077
4869.6	2053.6	4.6	20	12.07	0.09
4870.8	2053.1	6.5	20	12.37	0.102
4872.1	2052.5	8.4	20	12.67	0.114
4873.5	2051.9	10.2	20	12.97	0.126
4874.9	2051.3	11.8	20	13.27	0.138
4876.5	2050.7	13.1	20	13.58	0.15
4870.8	2053.1	0.2	30	11.37	0.067
4871.8	2052.6	1.5	30	11.63	0.077
4873	2052.1	3.2	30	11.94	0.09
4874.2	2051.6	5	30	12.24	0.102

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4875.6	2051	6.7	30	12.53	0.114
4876.9	2050.5	8.3	30	12.82	0.126
4878.4	2049.9	9.7	30	13.11	0.138
4879.9	2049.2	10.9	30	13.4	0.15
4881.5	2048.5	11.8	30	13.7	0.162
4874.8	2051.4	0.2	40	11.42	0.073
4876.4	2050.7	2	40	11.82	0.09
4877.7	2050.2	3.6	40	12.11	0.102
4879	2049.6	5.1	40	12.4	0.114
4880.4	2049	6.5	40	12.67	0.126
4881.9	2048.4	7.7	40	12.95	0.138
4883.4	2047.7	8.8	40	13.23	0.15
4885.1	2047.1	9.6	40	13.51	0.162
4879	2049.6	0.2	50	11.5	0.08
4879.9	2049.2	1	50	11.72	0.09
4881.2	2048.7	2.4	50	12	0.102
4882.6	2048.1	3.7	50	12.27	0.114
4884	2047.5	4.9	50	12.54	0.126
4885.5	2046.9	6	50	12.8	0.138
4887	2046.2	7	50	13.07	0.15
4888.7	2045.6	7.7	50	13.33	0.162

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

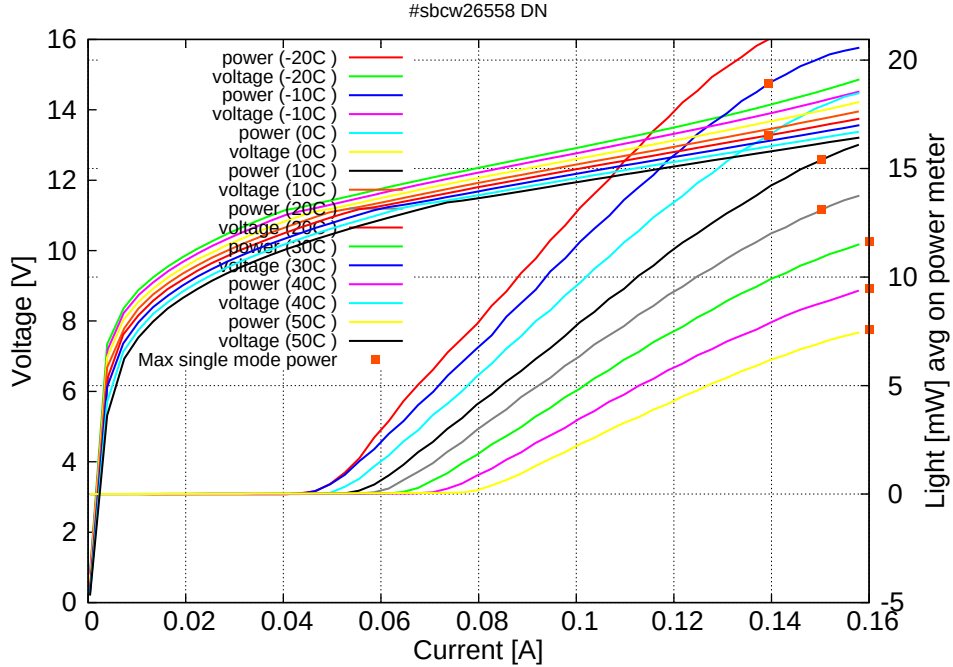


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.04A$ / $V_{th}=11.3V$ (2-wires measurements). Maximum operation

current: 0.14A between -20C and 0C, 0.15A between 10C and 20C; 0.16A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

