

Datasheet for #sbcw26573 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.

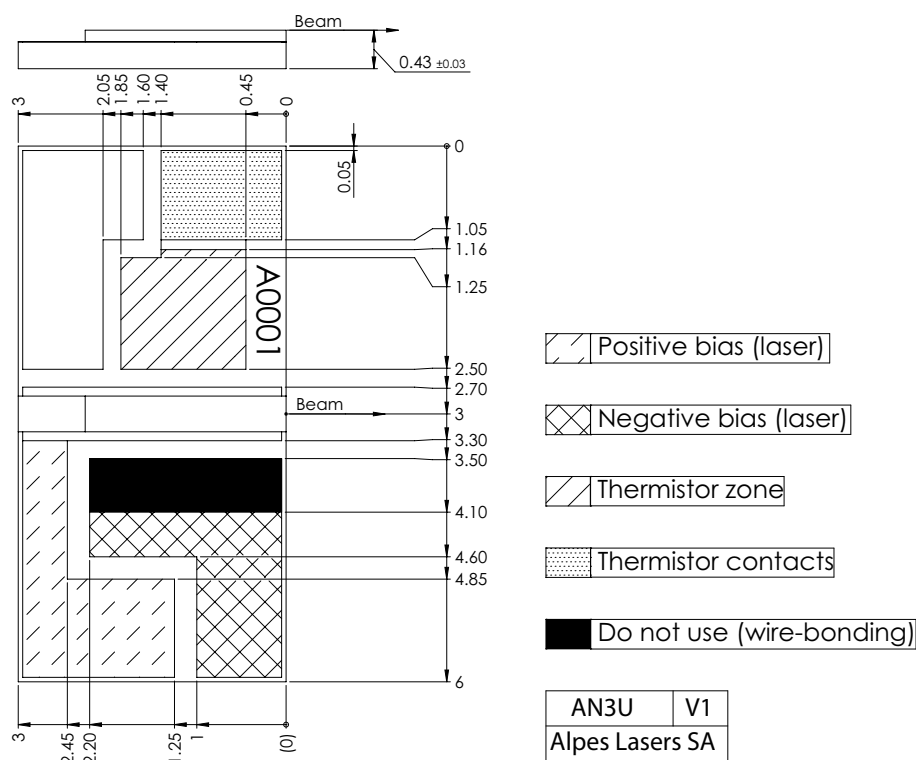


Figure 1: Mechanical and electrical interface for #sbcw26573 DN (please note that AlN submount numbering is A0U37)

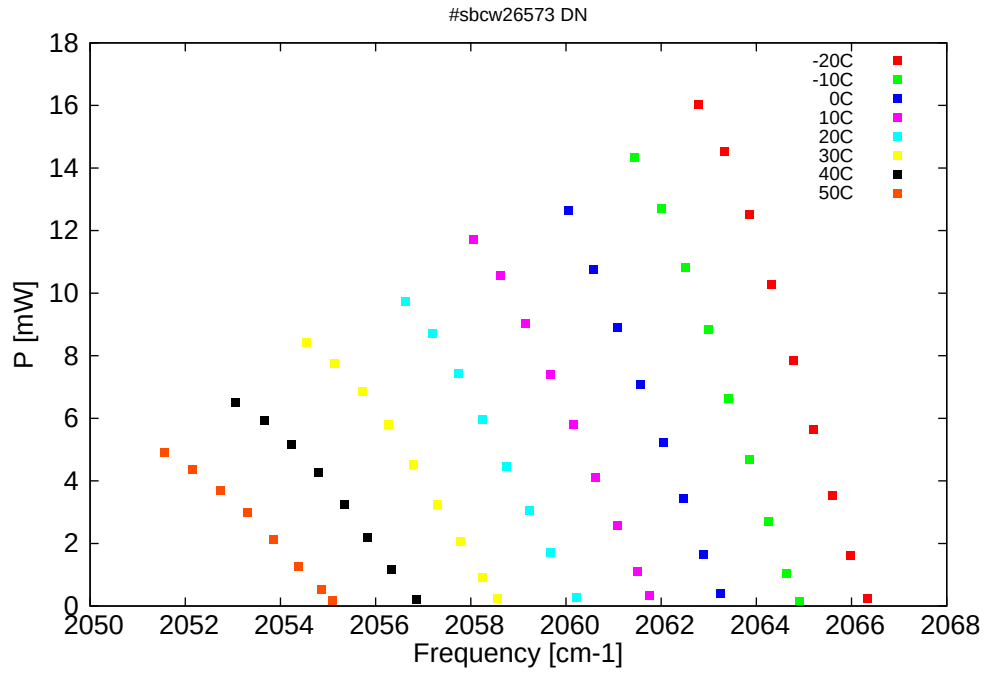


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

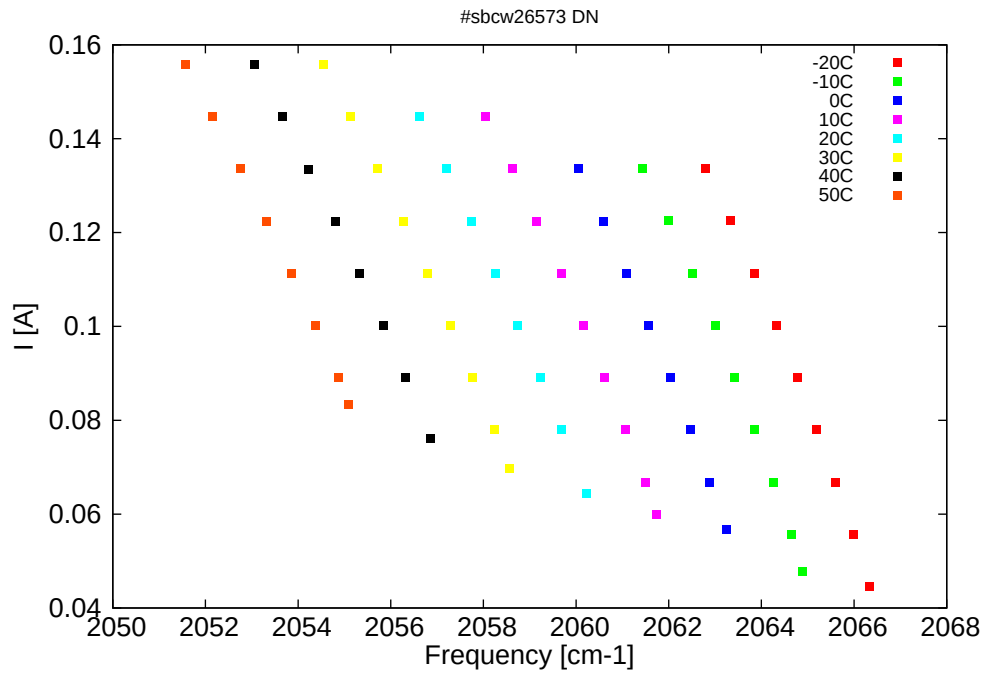


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4839.5	2066.3	0.2	-20	11.57	0.045
4840.3	2066	1.6	-20	11.95	0.056
4841.2	2065.6	3.5	-20	12.31	0.067
4842.2	2065.2	5.6	-20	12.64	0.078
4843.1	2064.8	7.9	-20	12.97	0.089
4844.2	2064.3	10.3	-20	13.3	0.1
4845.3	2063.8	12.5	-20	13.64	0.111
4846.5	2063.3	14.5	-20	14	0.123
4847.8	2062.8	16	-20	14.39	0.134
4842.9	2064.9	0.1	-10	11.55	0.048
4843.5	2064.6	1	-10	11.81	0.056
4844.4	2064.3	2.7	-10	12.15	0.067
4845.3	2063.8	4.7	-10	12.49	0.078
4846.3	2063.4	6.6	-10	12.78	0.089
4847.3	2063	8.8	-10	13.08	0.1
4848.4	2062.5	10.8	-10	13.4	0.111
4849.7	2062	12.7	-10	13.74	0.123
4851	2061.4	14.3	-10	14.12	0.134
4846.7	2063.2	0.4	0	11.71	0.057
4847.6	2062.9	1.6	0	12.01	0.067
4848.5	2062.5	3.4	0	12.33	0.078
4849.6	2062	5.2	0	12.64	0.089
4850.7	2061.6	7.1	0	12.95	0.1
4851.8	2061.1	8.9	0	13.25	0.111
4853	2060.6	10.8	0	13.56	0.122
4854.2	2060.1	12.6	0	13.89	0.134
4850.3	2061.7	0.3	10	11.69	0.06
4850.8	2061.5	1.1	10	11.89	0.067
4851.8	2061.1	2.6	10	12.2	0.078
4852.9	2060.6	4.1	10	12.51	0.089
4854	2060.2	5.8	10	12.8	0.1
4855.1	2059.7	7.4	10	13.1	0.111
4856.4	2059.2	9	10	13.39	0.122
4857.6	2058.6	10.6	10	13.7	0.134
4859	2058.1	11.7	10	14.02	0.145
4853.9	2060.2	0.3	20	11.71	0.064
4855.1	2059.7	1.7	20	12.09	0.078
4856.2	2059.2	3.1	20	12.38	0.089
4857.3	2058.7	4.5	20	12.67	0.1
4858.5	2058.3	6	20	12.95	0.111
4859.7	2057.7	7.4	20	13.24	0.122
4861	2057.2	8.7	20	13.52	0.134
4862.3	2056.6	9.7	20	13.82	0.145
4857.8	2058.6	0.3	30	11.76	0.07
4858.5	2058.2	0.9	30	11.97	0.078
4859.6	2057.8	2	30	12.25	0.089
4860.8	2057.3	3.2	30	12.53	0.1
4861.9	2056.8	4.5	30	12.8	0.111
4863.2	2056.3	5.8	30	13.08	0.122

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4864.5	2055.7	6.8	30	13.35	0.134
4865.9	2055.1	7.7	30	13.63	0.145
4867.2	2054.6	8.4	30	13.91	0.156
4861.8	2056.9	0.2	40	11.83	0.076
4863	2056.3	1.2	40	12.13	0.089
4864.2	2055.8	2.2	40	12.41	0.1
4865.4	2055.3	3.2	40	12.67	0.111
4866.6	2054.8	4.3	40	12.93	0.122
4868	2054.2	5.2	40	13.19	0.134
4869.3	2053.7	5.9	40	13.44	0.145
4870.8	2053.1	6.5	40	13.71	0.156
4866	2055.1	0.2	50	11.91	0.083
4866.5	2054.9	0.5	50	12.04	0.089
4867.7	2054.4	1.3	50	12.29	0.1
4868.9	2053.8	2.1	50	12.54	0.111
4870.2	2053.3	3	50	12.79	0.122
4871.5	2052.7	3.7	50	13.04	0.134
4872.9	2052.2	4.4	50	13.29	0.145
4874.3	2051.6	4.9	50	13.54	0.156

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

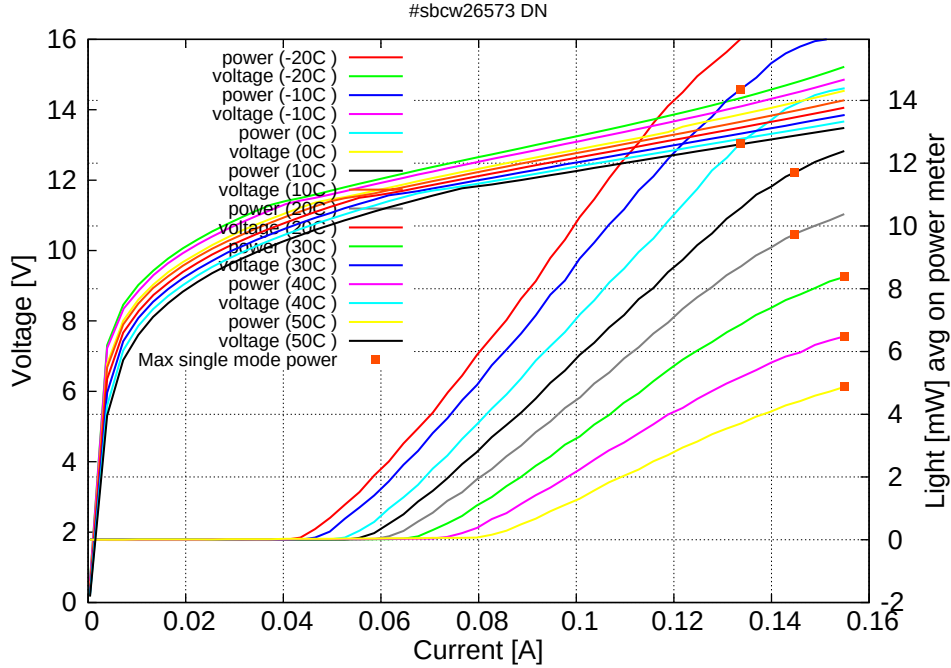


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.04A$ / $V_{th}=11.5V$ (2-wires measurements). Maximum operation current: 0.135A between -20C and 0C, 0.145A between 10C and 20C, 0.155A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

