

Datasheet for #sbcw27373 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.

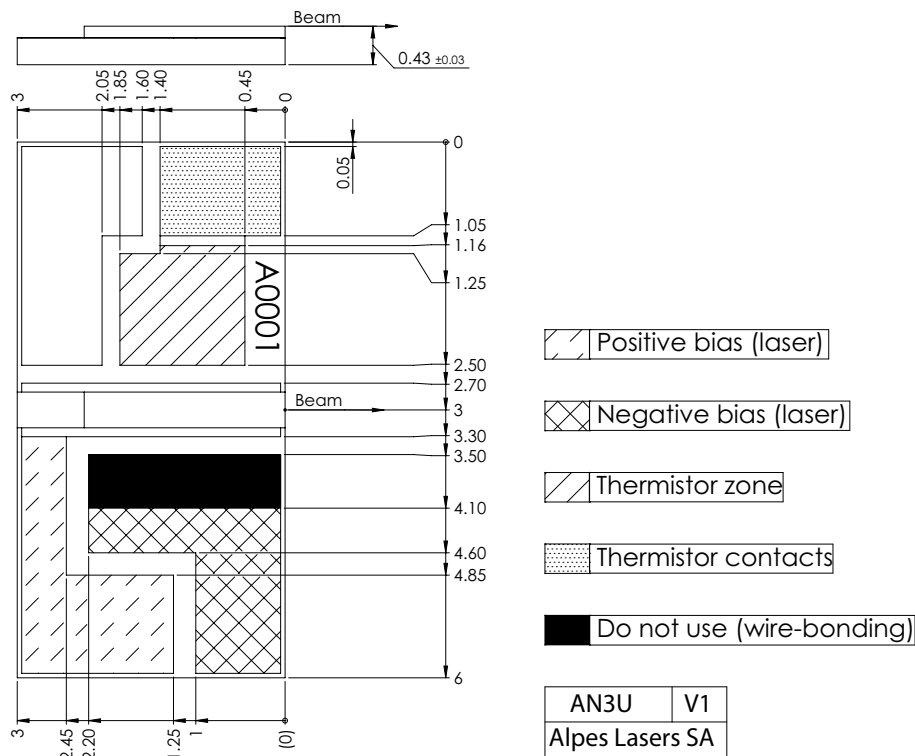


Figure 1: Mechanical and electrical interface for #sbcw27373 DN (please note that AlN submount numbering is A0UVU)

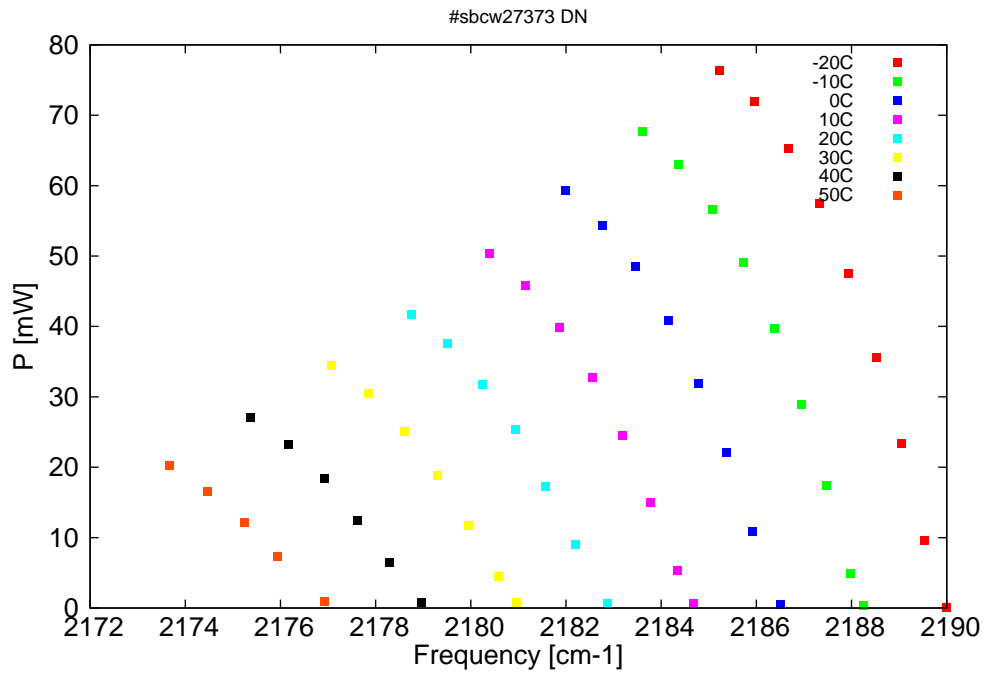


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

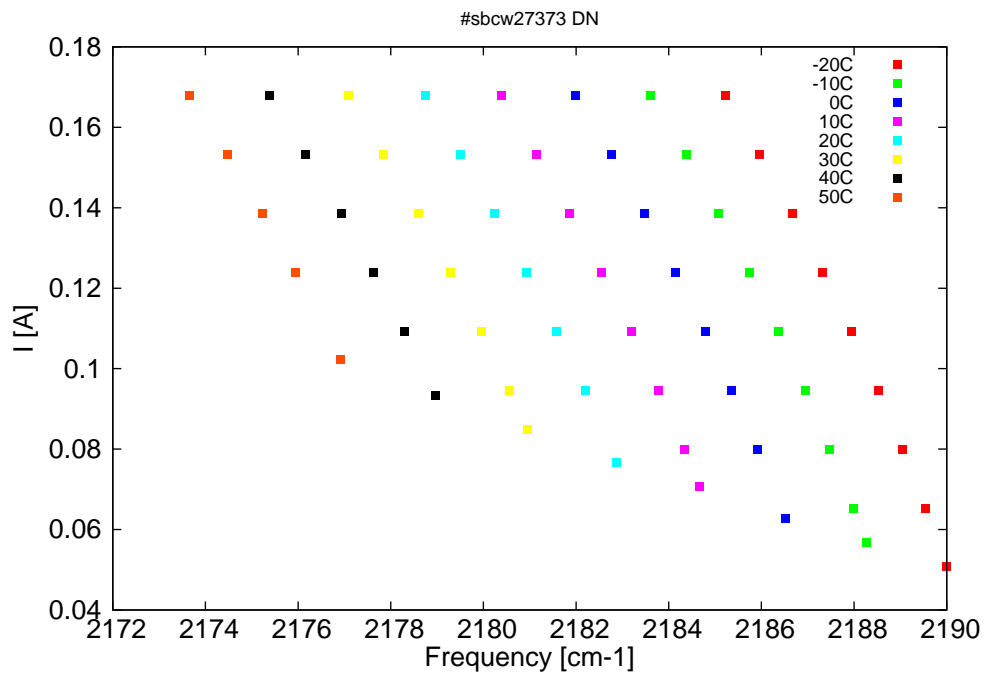


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4566.2	2190	0.1	-20	12.51	0.051
4567.2	2189.5	9.6	-20	12.79	0.065
4568.2	2189	23.4	-20	13.09	0.08
4569.3	2188.5	35.7	-20	13.39	0.095
4570.5	2187.9	47.5	-20	13.68	0.109
4571.8	2187.3	57.4	-20	13.97	0.124
4573.2	2186.7	65.3	-20	14.26	0.139
4574.6	2186	72	-20	14.55	0.153
4576.2	2185.2	76.3	-20	14.83	0.168
4569.8	2188.3	0.3	-10	12.51	0.057
4570.4	2188	4.9	-10	12.66	0.065
4571.5	2187.5	17.4	-10	12.96	0.08
4572.6	2186.9	28.9	-10	13.24	0.095
4573.8	2186.4	39.7	-10	13.53	0.109
4575.1	2185.7	49	-10	13.8	0.124
4576.5	2185.1	56.7	-10	14.08	0.139
4578	2184.4	63.1	-10	14.36	0.153
4579.6	2183.6	67.6	-10	14.63	0.168
4573.5	2186.5	0.6	0	12.52	0.063
4574.7	2185.9	10.9	0	12.82	0.08
4575.9	2185.4	22.1	0	13.11	0.095
4577.1	2184.8	31.8	0	13.38	0.109
4578.4	2184.1	40.9	0	13.65	0.124
4579.9	2183.5	48.5	0	13.92	0.139
4581.3	2182.8	54.4	0	14.19	0.153
4583	2182	59.3	0	14.46	0.168
4577.4	2184.7	0.6	10	12.56	0.071
4578	2184.3	5.3	10	12.72	0.08
4579.2	2183.8	15	10	12.98	0.095
4580.5	2183.2	24.5	10	13.25	0.109
4581.8	2182.6	32.7	10	13.51	0.124
4583.2	2181.9	39.9	10	13.77	0.139
4584.7	2181.2	45.8	10	14.03	0.153
4586.3	2180.4	50.4	10	14.3	0.168
4581.1	2182.9	0.6	20	12.57	0.077
4582.5	2182.2	9	20	12.86	0.095
4583.8	2181.6	17.3	20	13.12	0.109
4585.2	2180.9	25.4	20	13.37	0.124
4586.6	2180.2	31.8	20	13.63	0.139
4588.2	2179.5	37.6	20	13.88	0.153
4589.8	2178.8	41.8	20	14.13	0.168
4585.1	2181	0.8	30	12.65	0.085
4586	2180.6	4.6	30	12.79	0.095
4587.3	2179.9	11.7	30	13.04	0.109
4588.6	2179.3	18.8	30	13.28	0.124
4590.1	2178.6	25.2	30	13.53	0.139
4591.7	2177.9	30.5	30	13.77	0.153
4593.3	2177.1	34.5	30	14	0.168
4589.3	2179	0.8	40	12.68	0.093

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4590.7	2178.3	6.5	40	12.92	0.109
4592.2	2177.6	12.5	40	13.15	0.124
4593.6	2176.9	18.4	40	13.38	0.139
4595.2	2176.2	23.2	40	13.62	0.153
4596.9	2175.4	27.1	40	13.85	0.168
4593.7	2176.9	0.9	50	12.74	0.102
4595.7	2175.9	7.3	50	13.04	0.124
4597.2	2175.2	12.1	50	13.27	0.139
4598.8	2174.5	16.5	50	13.49	0.153
4600.5	2173.7	20.2	50	13.7	0.168

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

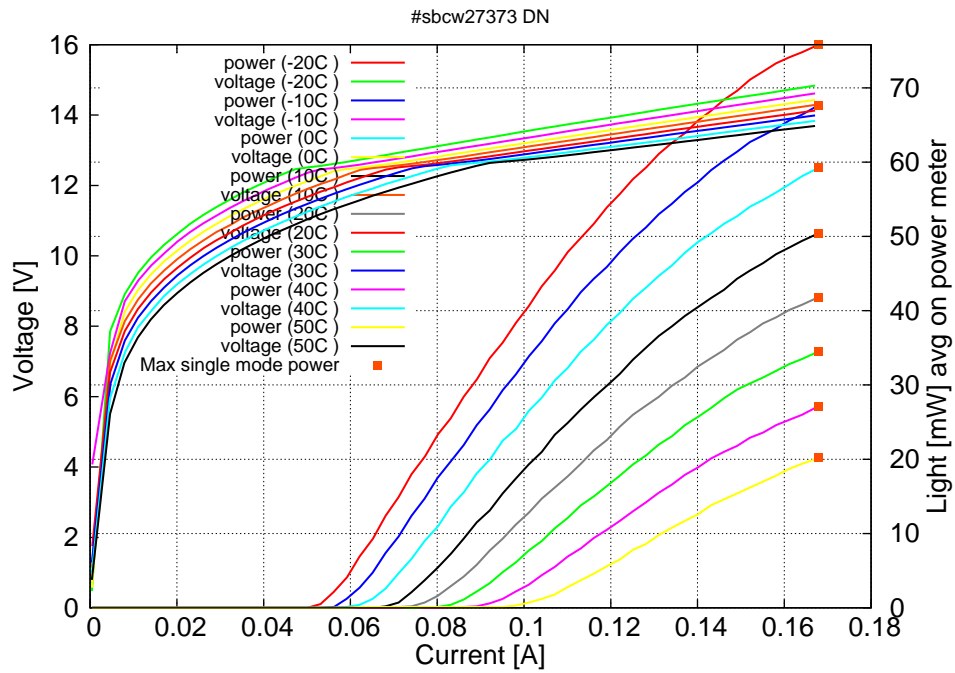


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=12.5V$ (2-wires measurements). Maximum operation current: 0.17A for all temperatures.

