

Datasheet for #sbcw27376 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 #sbcw27376 DN (please note that AlN submount numbering is A0UW2)

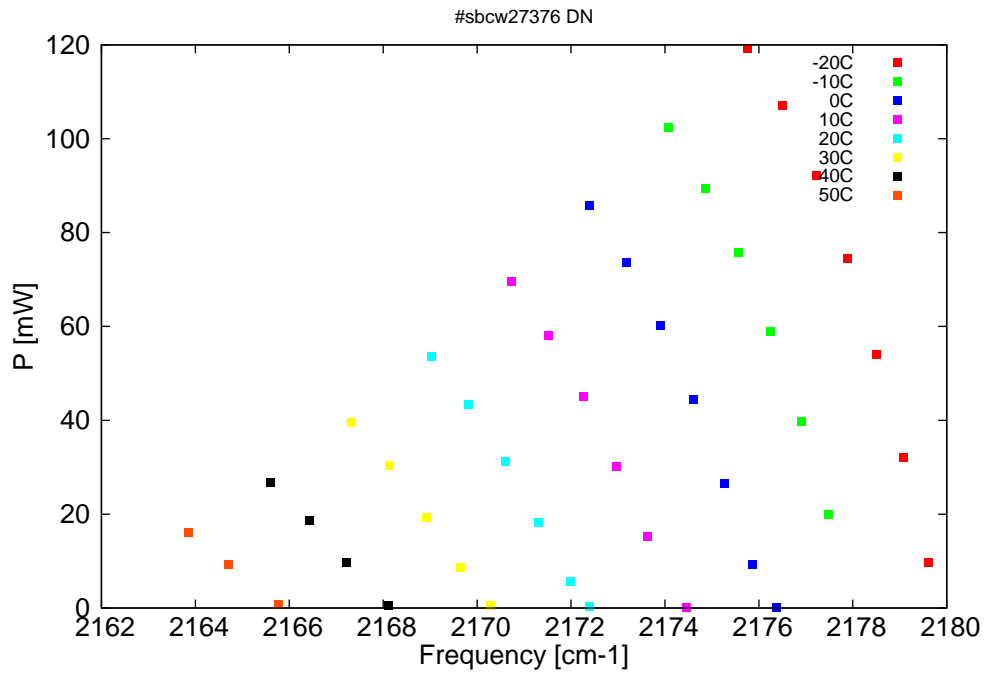


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

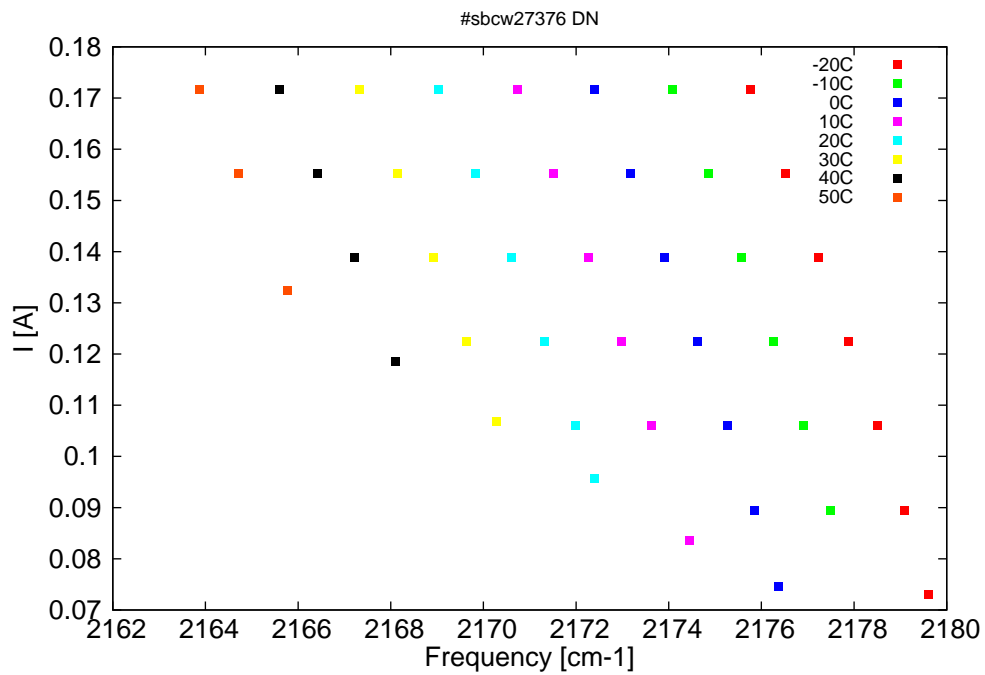


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4588	2179.6	9.8	-20	12.62	0.073
4589.1	2179.1	32.1	-20	12.89	0.09
4590.3	2178.5	54.1	-20	13.16	0.106
4591.6	2177.9	74.5	-20	13.43	0.122
4593	2177.2	92.3	-20	13.7	0.139
4594.5	2176.5	107.2	-20	13.97	0.155
4596.1	2175.8	119.2	-20	14.24	0.172
4592.5	2177.5	19.9	-10	12.77	0.09
4593.7	2176.9	39.7	-10	13.03	0.106
4595.1	2176.3	58.9	-10	13.29	0.122
4596.5	2175.6	75.7	-10	13.55	0.139
4598	2174.9	89.5	-10	13.81	0.155
4599.6	2174.1	102.3	-10	14.06	0.172
4594.8	2176.4	0	0	12.49	0.075
4595.9	2175.9	9.2	0	12.66	0.09
4597.2	2175.3	26.6	0	12.91	0.106
4598.5	2174.6	44.5	0	13.16	0.122
4600	2173.9	60.1	0	13.41	0.139
4601.5	2173.2	73.6	0	13.66	0.155
4603.2	2172.4	85.7	0	13.9	0.172
4598.8	2174.5	0.1	10	12.52	0.084
4600.6	2173.6	15.2	10	12.79	0.106
4602	2173	30.2	10	13.03	0.122
4603.5	2172.3	45	10	13.27	0.139
4605.1	2171.5	58.1	10	13.51	0.155
4606.7	2170.7	69.5	10	13.75	0.172
4603.2	2172.4	0.3	20	12.58	0.096
4604.1	2172	5.7	20	12.7	0.106
4605.5	2171.3	18.3	20	12.93	0.122
4607	2170.6	31.3	20	13.16	0.139
4608.7	2169.8	43.5	20	13.39	0.155
4610.3	2169	53.7	20	13.62	0.172
4607.7	2170.3	0.6	30	12.64	0.107
4609.1	2169.6	8.7	30	12.82	0.122
4610.6	2168.9	19.3	30	13.05	0.139
4612.3	2168.1	30.3	30	13.27	0.155
4614	2167.3	39.6	30	13.49	0.172
4612.3	2168.1	0.6	40	12.72	0.119
4614.2	2167.2	9.7	40	12.96	0.139
4615.9	2166.4	18.6	40	13.16	0.155
4617.7	2165.6	26.7	40	13.37	0.172
4617.3	2165.8	0.8	50	12.81	0.132
4619.6	2164.7	9.2	50	13.07	0.155
4621.4	2163.9	16	50	13.28	0.172

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

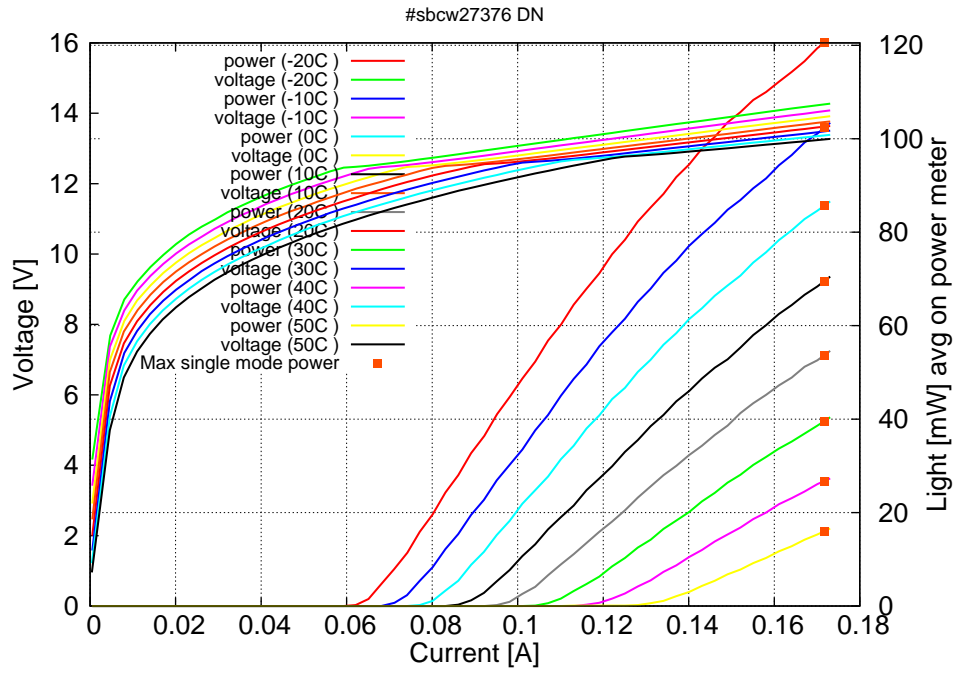


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=12.5V$ (2-wires measurements). Maximum operation current: 0.175A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

