

Datasheet for #sbcw27380 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 #sbcw27380 DN (please note that AlN submount numbering is A0VRJ)

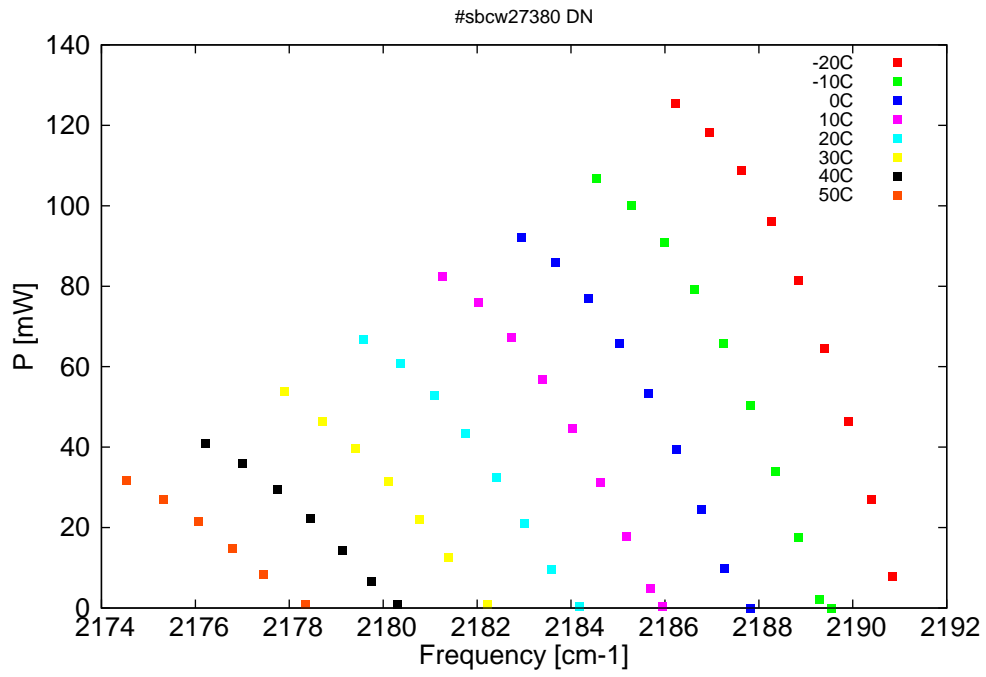


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

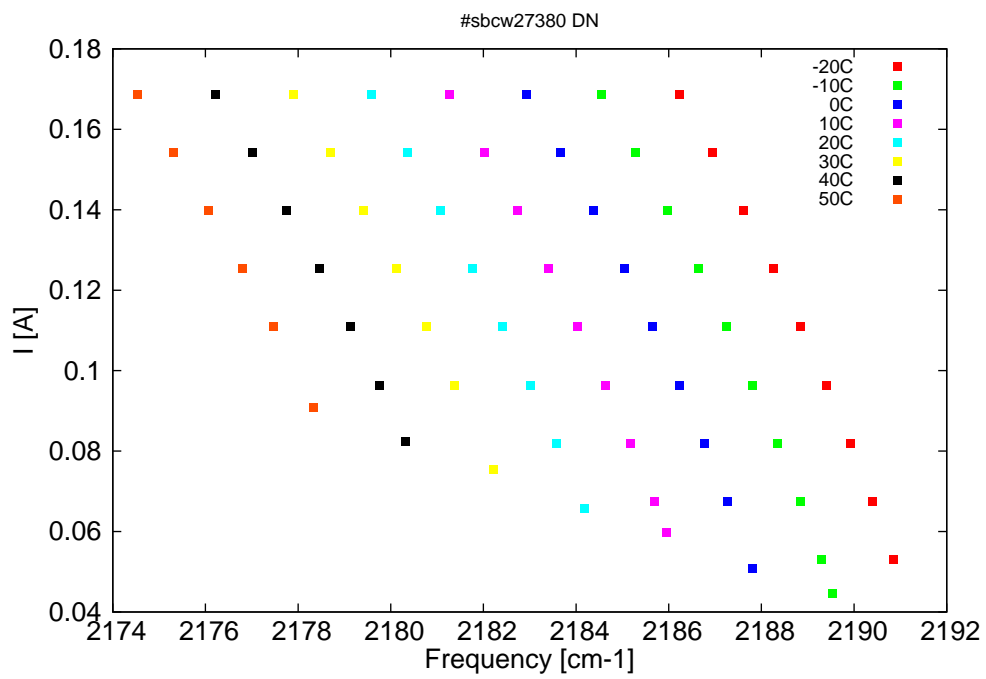


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4564.4	2190.8	7.9	-20	12.24	0.053
4565.4	2190.4	26.9	-20	12.53	0.068
4566.4	2189.9	46.2	-20	12.81	0.082
4567.5	2189.4	64.5	-20	13.09	0.096
4568.6	2188.8	81.3	-20	13.37	0.111
4569.8	2188.3	96.1	-20	13.65	0.125
4571.2	2187.6	108.7	-20	13.92	0.14
4572.6	2186.9	118.3	-20	14.2	0.154
4574.1	2186.2	125.5	-20	14.47	0.169
4567.2	2189.5	0	-10	12.03	0.045
4567.7	2189.3	2.2	-10	12.14	0.053
4568.6	2188.8	17.4	-10	12.42	0.068
4569.6	2188.4	34	-10	12.69	0.082
4570.8	2187.8	50.4	-10	12.97	0.096
4572	2187.2	65.8	-10	13.24	0.111
4573.2	2186.6	79.2	-10	13.51	0.125
4574.6	2186	90.8	-10	13.78	0.14
4576.1	2185.3	100	-10	14.04	0.154
4577.6	2184.6	106.7	-10	14.31	0.169
4570.8	2187.8	0	0	12.03	0.051
4571.9	2187.3	9.7	0	12.3	0.068
4572.9	2186.8	24.6	0	12.57	0.082
4574.1	2186.2	39.4	0	12.83	0.096
4575.3	2185.6	53.4	0	13.1	0.111
4576.6	2185	65.8	0	13.36	0.125
4578	2184.4	77.1	0	13.62	0.14
4579.4	2183.7	85.9	0	13.88	0.154
4581	2182.9	92.3	0	14.14	0.169
4574.7	2186	0.5	10	12.1	0.06
4575.2	2185.7	4.9	10	12.23	0.068
4576.3	2185.2	17.7	10	12.48	0.082
4577.4	2184.6	31.3	10	12.74	0.096
4578.7	2184	44.5	10	13	0.111
4580	2183.4	56.8	10	13.26	0.125
4581.4	2182.7	67.3	10	13.52	0.14
4582.9	2182	75.9	10	13.78	0.154
4584.5	2181.3	82.3	10	14.03	0.169
4578.4	2184.2	0.5	20	12.15	0.066
4579.6	2183.6	9.6	20	12.41	0.082
4580.8	2183	21	20	12.66	0.096
4582.1	2182.4	32.5	20	12.92	0.111
4583.5	2181.8	43.3	20	13.17	0.125
4584.9	2181.1	52.8	20	13.42	0.14
4586.4	2180.4	60.8	20	13.67	0.154
4588	2179.6	66.7	20	13.92	0.169
4582.5	2182.2	1	30	12.26	0.075
4584.2	2181.4	12.6	30	12.59	0.096
4585.5	2180.8	22	30	12.84	0.111
4586.9	2180.1	31.4	30	13.09	0.125

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4588.4	2179.4	39.6	30	13.33	0.14
4589.9	2178.7	46.4	30	13.57	0.154
4591.6	2177.9	53.9	30	13.8	0.169
4586.5	2180.3	0.9	40	12.3	0.082
4587.7	2179.7	6.5	40	12.5	0.096
4589	2179.1	14.4	40	12.72	0.111
4590.4	2178.5	22.2	40	12.96	0.125
4591.9	2177.7	29.6	40	13.2	0.14
4593.4	2177	35.9	40	13.43	0.154
4595.1	2176.2	41	40	13.67	0.169
4590.7	2178.3	0.9	50	12.36	0.091
4592.5	2177.5	8.3	50	12.65	0.111
4593.9	2176.8	14.9	50	12.87	0.125
4595.5	2176.1	21.6	50	13.1	0.14
4597	2175.3	27	50	13.32	0.154
4598.7	2174.5	31.7	50	13.54	0.169

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

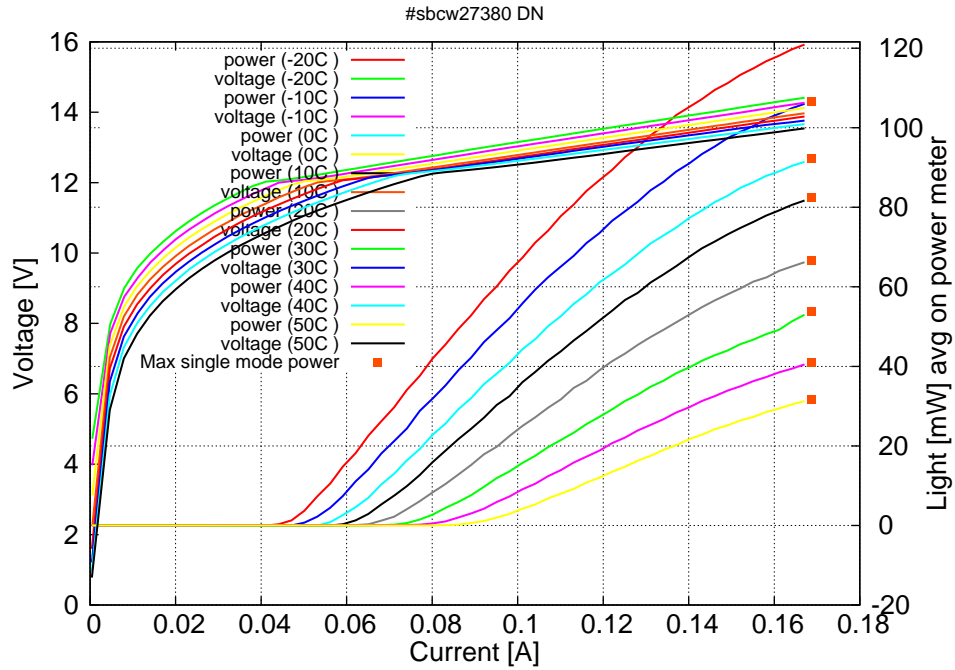


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.05A$ / $V_{th}=12.1V$ (2-wires measurements). Maximum operation current: 0.17A for all temperatures.

