

Datasheet for #sbcw20376 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

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 #sbcw20376 DN (please note that AlN submount numbering is A0PJ6)

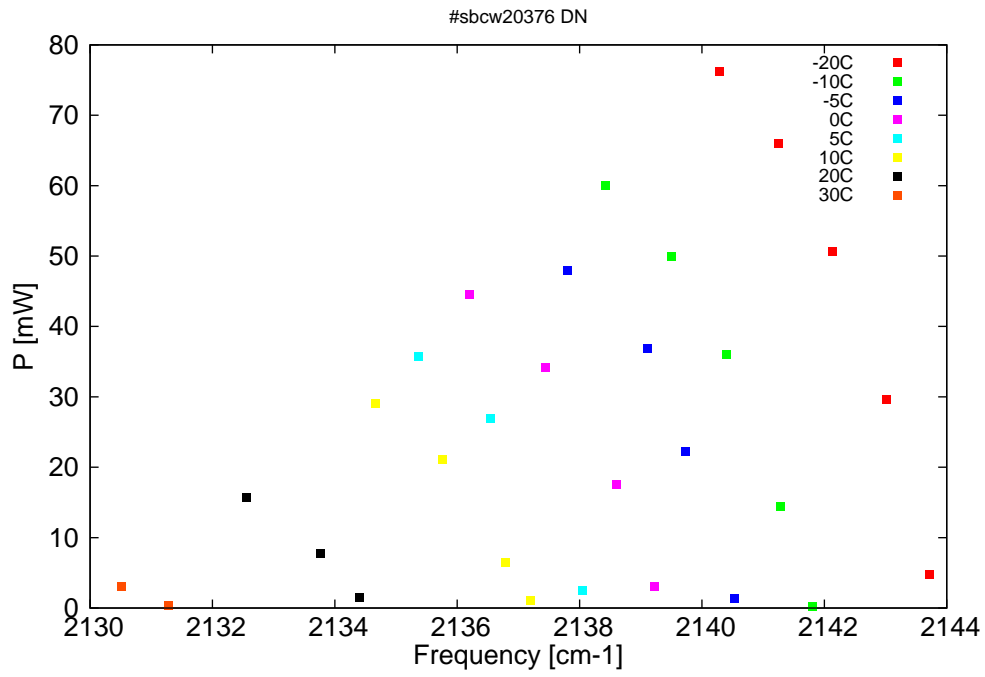


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

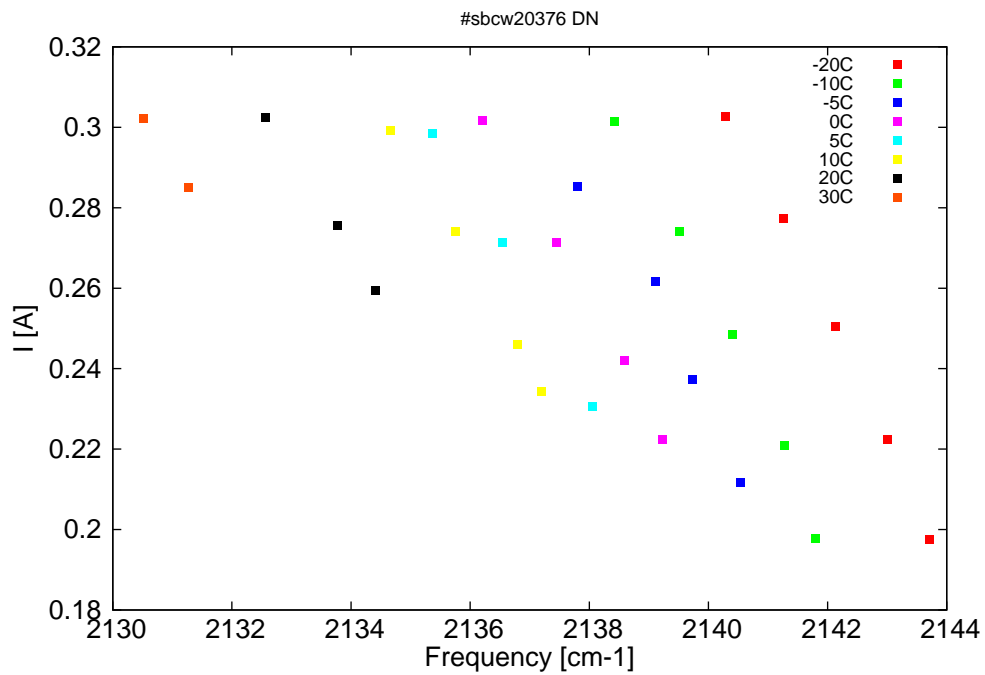


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4664.8	2143.7	4.8	-20	12.33	0.198
4666.3	2143	29.6	-20	12.48	0.222
4668.2	2142.1	50.6	-20	12.7	0.25
4670.2	2141.3	66	-20	12.94	0.277
4672.3	2140.3	76.2	-20	13.22	0.303
4669	2141.8	0.2	-10	12.3	0.198
4670.1	2141.3	14.4	-10	12.4	0.221
4672	2140.4	36.1	-10	12.62	0.249
4674	2139.5	50	-10	12.85	0.274
4676.4	2138.4	60	-10	13.15	0.301
4671.7	2140.5	1.4	-5	12.36	0.212
4673.5	2139.7	22.2	-5	12.54	0.237
4674.8	2139.1	36.8	-5	12.77	0.262
4677.7	2137.8	48	-5	13.05	0.285
4674.6	2139.2	3.1	0	12.46	0.222
4676	2138.6	17.6	0	12.61	0.242
4678.5	2137.4	34.1	0	12.86	0.271
4681.2	2136.2	44.5	0	13.14	0.302
4677.2	2138.1	2.5	5	12.48	0.23
4680.4	2136.6	26.9	5	12.79	0.271
4683.1	2135.4	35.7	5	13.06	0.298
4679	2137.2	1.1	10	12.44	0.234
4679.9	2136.8	6.4	10	12.52	0.246
4682.2	2135.8	21.1	10	12.77	0.274
4684.6	2134.7	29.1	10	13.04	0.299
4685.1	2134.4	1.5	20	12.63	0.26
4686.6	2133.8	7.8	20	12.76	0.276
4689.2	2132.6	15.6	20	13.04	0.302
4692	2131.3	0.4	30	12.91	0.285
4693.7	2130.5	3	30	13.07	0.302

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

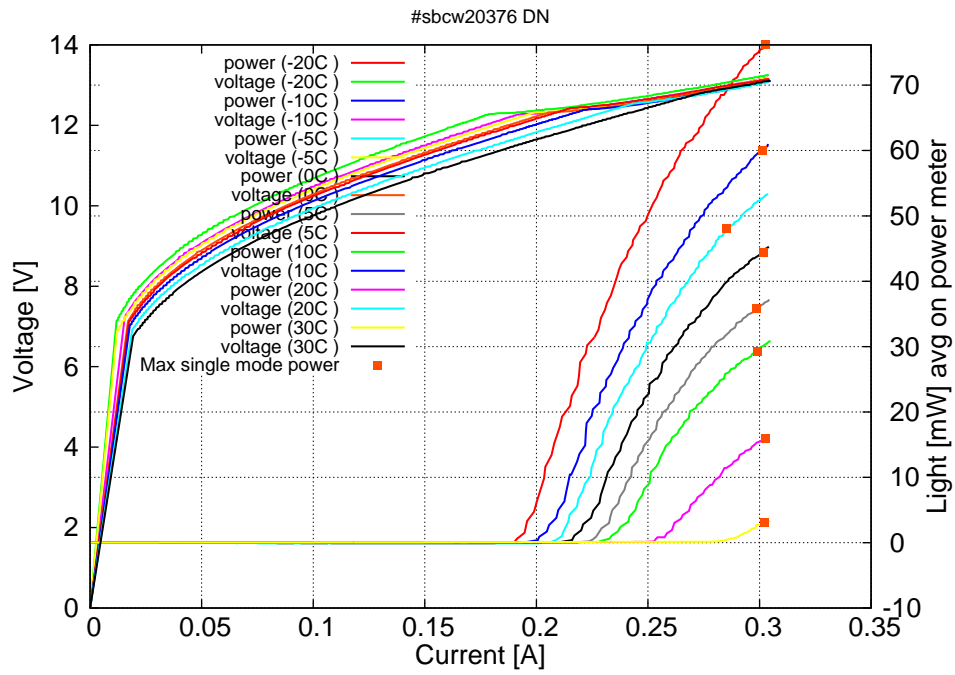


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.305A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

