

Datasheet for #sbcw20198 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 #sbcw20198 DN (please note that AlN submount numbering is A0RAR)

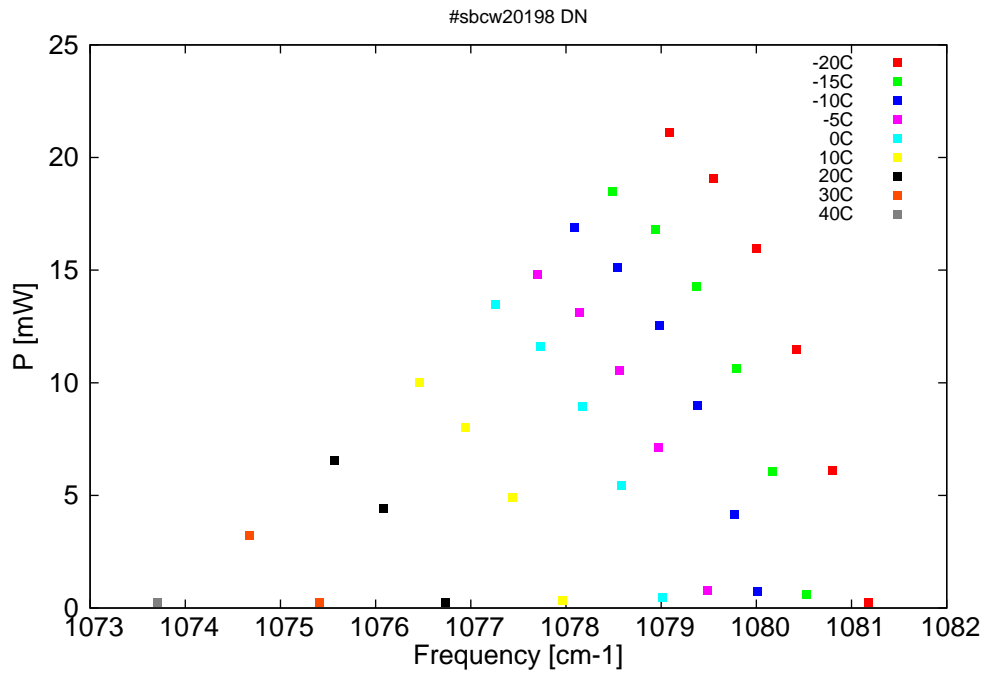


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

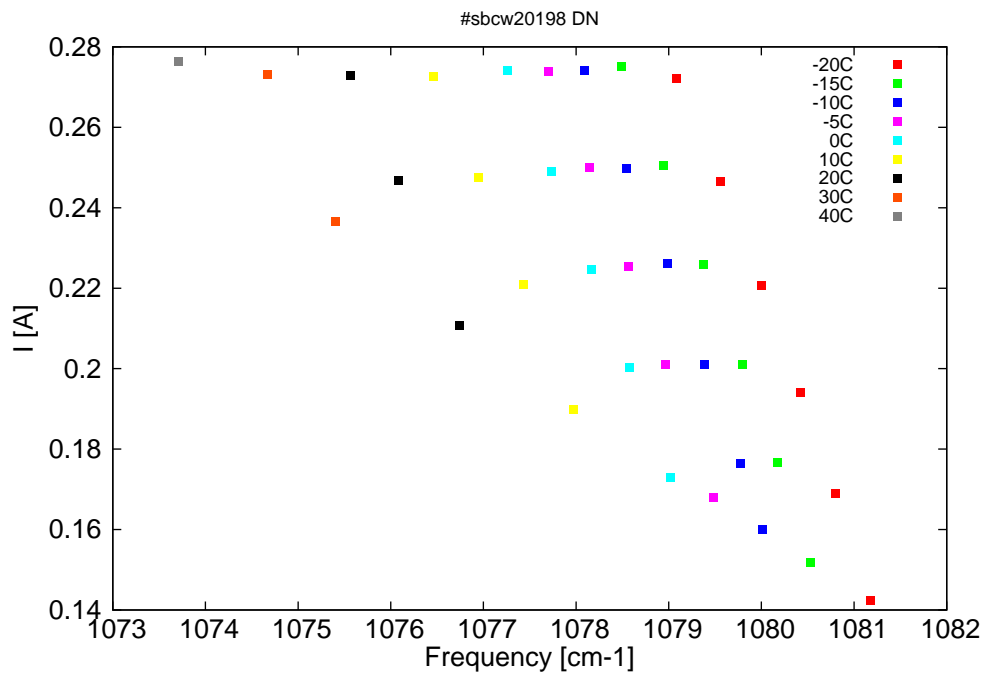


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9249.2	1081.2	0.2	-20	11.01	0.142
9252.4	1080.8	6.1	-20	11.51	0.169
9255.7	1080.4	11.5	-20	11.97	0.194
9259.2	1080	16	-20	12.41	0.221
9263.1	1079.6	19.1	-20	12.83	0.246
9267.1	1079.1	21.1	-20	13.24	0.272
9254.7	1080.5	0.6	-15	11.06	0.152
9257.8	1080.2	6.1	-15	11.5	0.177
9261.1	1079.8	10.6	-15	11.92	0.201
9264.6	1079.4	14.3	-15	12.33	0.226
9268.3	1078.9	16.8	-15	12.71	0.251
9272.2	1078.5	18.5	-15	13.08	0.275
9259.1	1080	0.8	-10	11.13	0.16
9261.2	1079.8	4.2	-10	11.43	0.176
9264.5	1079.4	9	-10	11.85	0.201
9268	1079	12.5	-10	12.25	0.226
9271.8	1078.5	15.1	-10	12.62	0.25
9275.7	1078.1	16.9	-10	12.98	0.274
9263.7	1079.5	0.8	-5	11.2	0.168
9268.1	1079	7.1	-5	11.78	0.201
9271.6	1078.6	10.6	-5	12.17	0.225
9275.2	1078.1	13.1	-5	12.55	0.25
9279	1077.7	14.8	-5	12.91	0.274
9267.7	1079	0.5	0	11.23	0.173
9271.5	1078.6	5.4	0	11.71	0.2
9275	1078.2	8.9	0	12.1	0.225
9278.8	1077.7	11.6	0	12.48	0.249
9282.8	1077.3	13.5	0	12.85	0.274
9276.7	1078	0.3	10	11.45	0.19
9281.3	1077.4	4.9	10	11.97	0.221
9285.5	1076.9	8	10	12.38	0.248
9289.7	1076.5	10	10	12.76	0.273
9287.3	1076.7	0.2	20	11.66	0.211
9292.9	1076.1	4.4	20	12.23	0.247
9297.4	1075.6	6.6	20	12.61	0.273
9298.8	1075.4	0.2	30	11.94	0.237
9305.2	1074.7	3.2	30	12.48	0.273
9313.5	1073.7	0.2	40	12.38	0.276

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

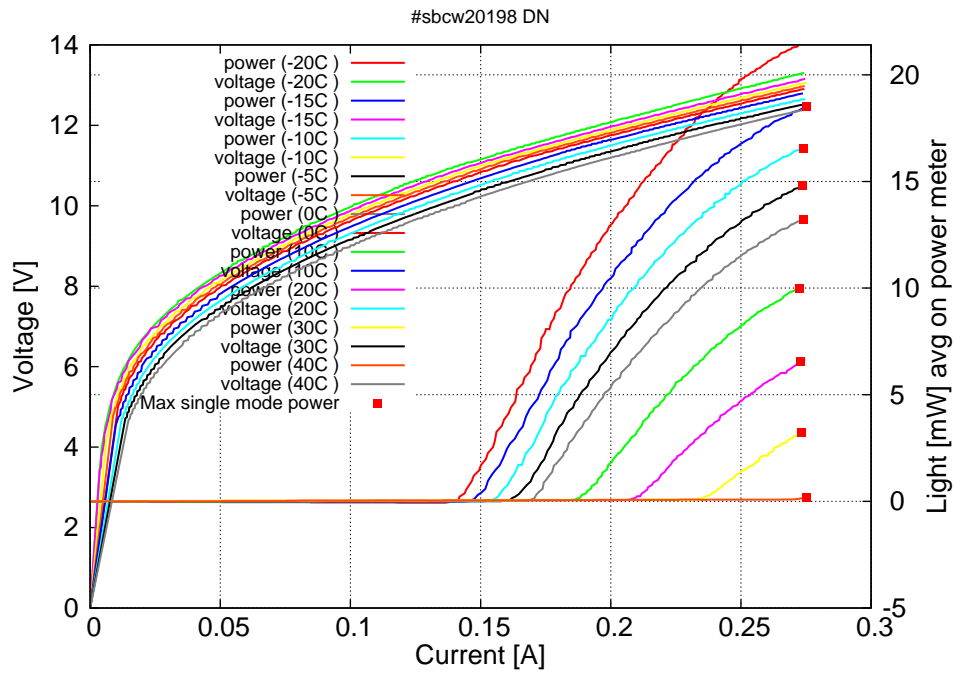


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=11.0V$ (2-wires measurements). Maximum operation current: 0.275A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

