

Datasheet for #sbcw20211 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.

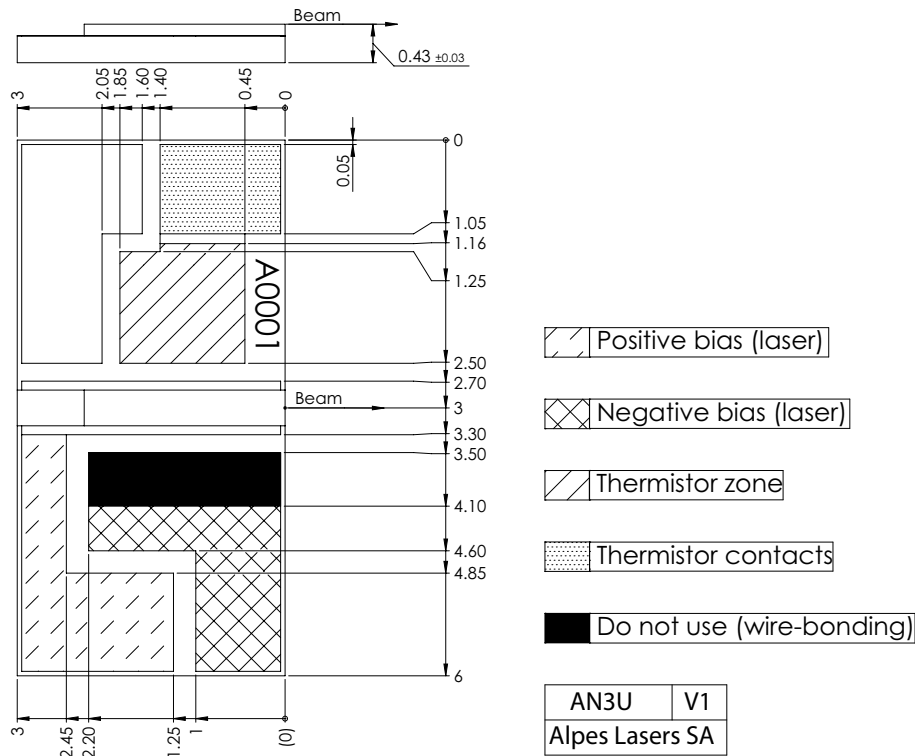


Figure 1: Mechanical and electrical interface for #sbcw20211 DN (please note that AlN submount numbering is A0R4V)

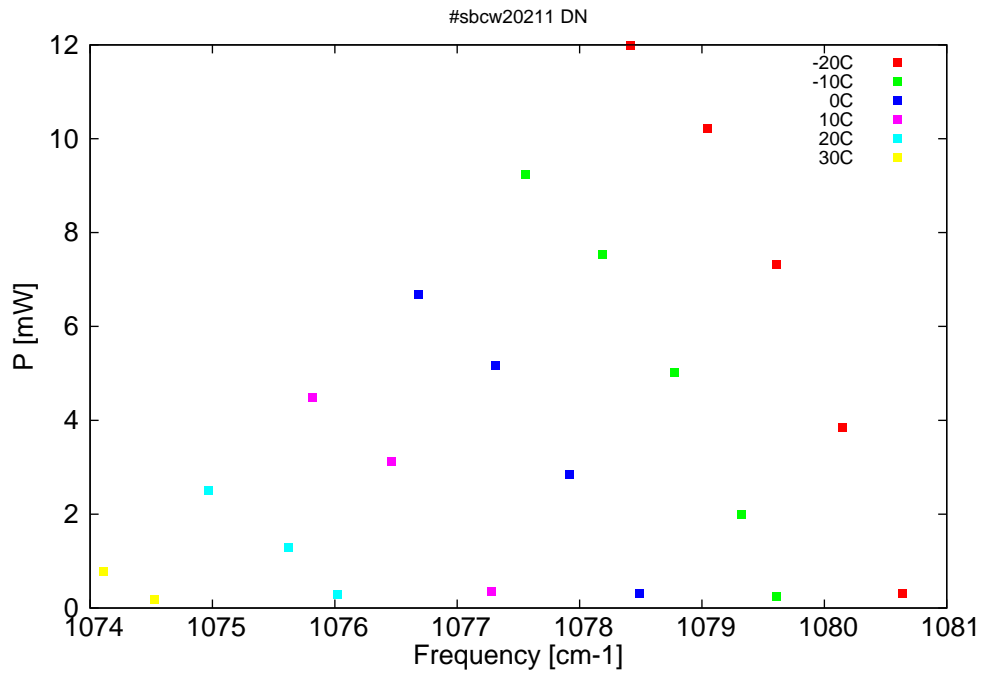


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

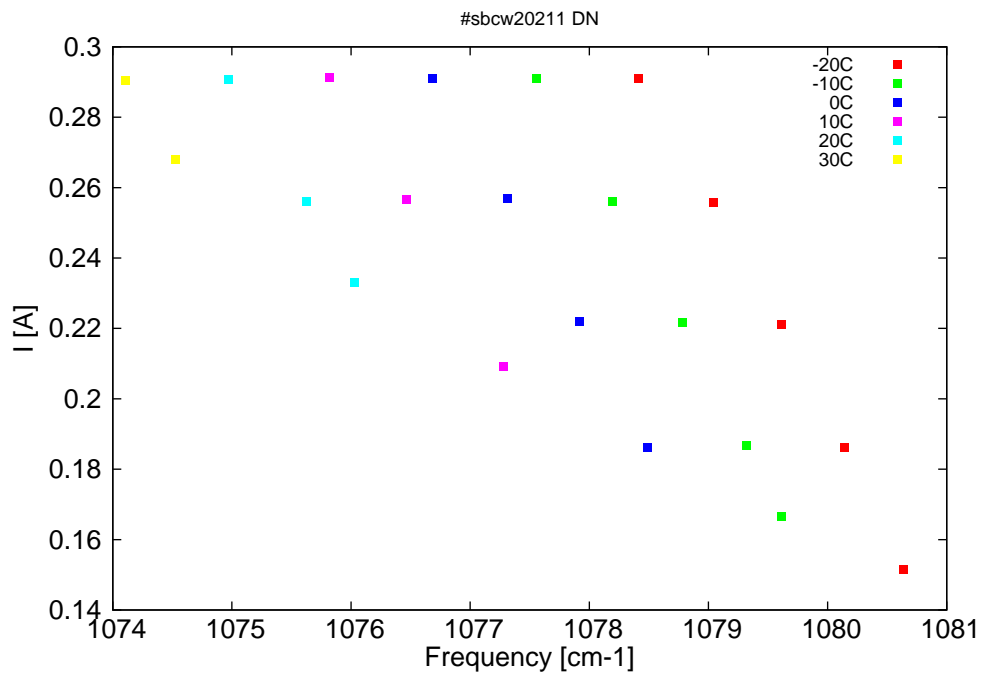


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9253.8	1080.6	0.3	-20	10.8	0.152
9258	1080.1	3.8	-20	11.51	0.186
9262.6	1079.6	7.3	-20	12.17	0.221
9267.5	1079	10.2	-20	12.8	0.256
9272.9	1078.4	12	-20	13.42	0.291
9262.6	1079.6	0.3	-10	10.98	0.167
9265.1	1079.3	2	-10	11.37	0.187
9269.7	1078.8	5	-10	12.02	0.222
9274.8	1078.2	7.5	-10	12.65	0.256
9280.2	1077.6	9.2	-10	13.22	0.291
9272.2	1078.5	0.3	0	11.22	0.186
9277.1	1077.9	2.9	0	11.87	0.222
9282.4	1077.3	5.2	0	12.48	0.257
9287.8	1076.7	6.7	0	13.03	0.291
9282.6	1077.3	0.4	10	11.49	0.209
9289.7	1076.5	3.1	10	12.3	0.257
9295.3	1075.8	4.5	10	12.83	0.291
9293.5	1076	0.3	20	11.73	0.233
9296.9	1075.6	1.3	20	12.1	0.256
9302.6	1075	2.5	20	12.62	0.291
9306.4	1074.5	0.2	30	12.09	0.268
9310	1074.1	0.8	30	12.41	0.29

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

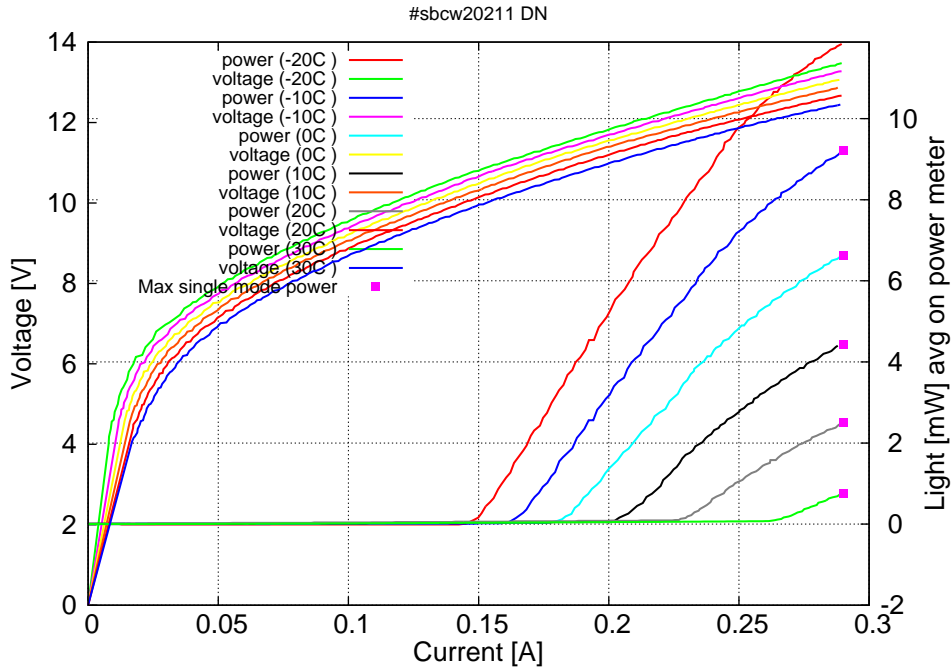


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=10.7V$ (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

