

Datasheet for #sbcw20754 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 #sbcw20754 DN (please note that AlN submount numbering is A0T1Z)

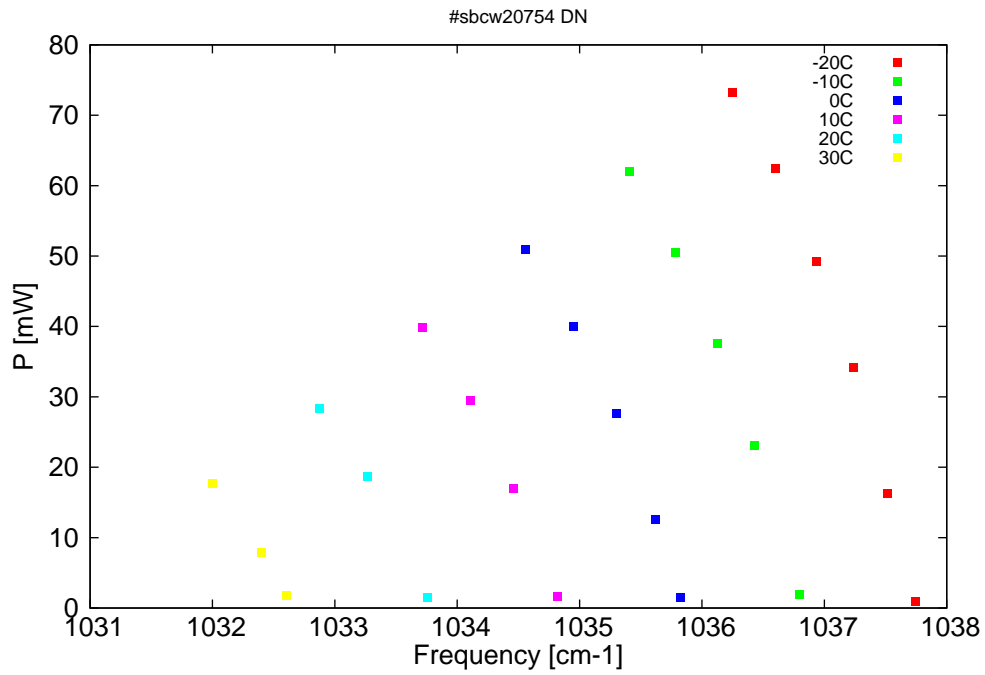


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

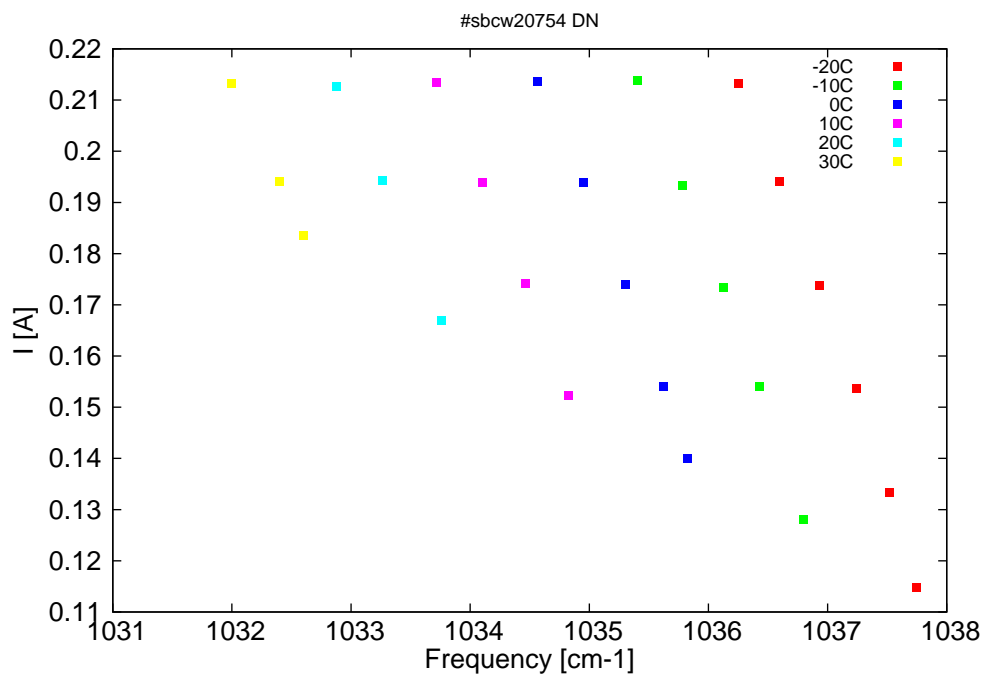


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9636.3	1037.7	1	-20	9.18	0.115
9638.4	1037.5	16.3	-20	9.51	0.133
9641	1037.2	34.1	-20	9.87	0.154
9643.8	1036.9	49.2	-20	10.24	0.174
9646.9	1036.6	62.4	-20	10.6	0.194
9650.2	1036.2	73.3	-20	10.95	0.213
9645.1	1036.8	1.9	-10	9.32	0.128
9648.5	1036.4	23.1	-10	9.79	0.154
9651.3	1036.1	37.6	-10	10.13	0.173
9654.5	1035.8	50.5	-10	10.49	0.193
9658	1035.4	62	-10	10.86	0.214
9654.1	1035.8	1.5	0	9.46	0.14
9656.1	1035.6	12.5	0	9.7	0.154
9659	1035.3	27.6	0	10.05	0.174
9662.3	1034.9	40	0	10.41	0.194
9665.9	1034.6	50.9	0	10.77	0.214
9663.5	1034.8	1.6	10	9.59	0.152
9666.9	1034.5	17	10	9.98	0.174
9670.2	1034.1	29.5	10	10.33	0.194
9673.8	1033.7	39.8	10	10.68	0.214
9673.5	1033.8	1.5	20	9.77	0.167
9678.1	1033.3	18.6	20	10.25	0.194
9681.7	1032.9	28.3	20	10.59	0.213
9684.2	1032.6	1.8	30	9.98	0.184
9686.2	1032.4	7.9	30	10.17	0.194
9689.9	1032	17.7	30	10.51	0.213

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

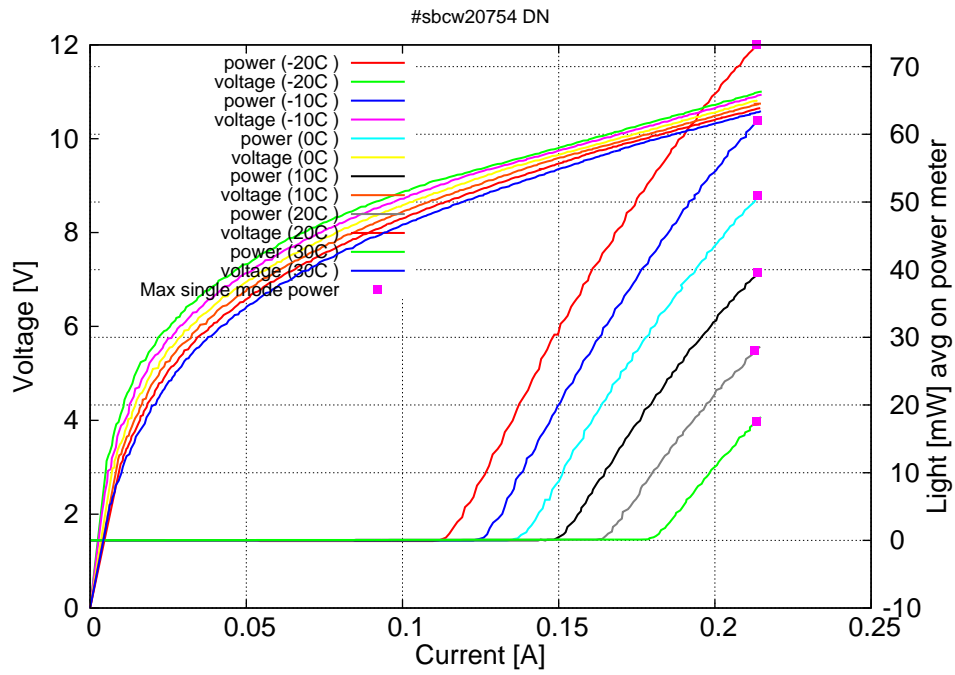


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.215A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

