

Datasheet for #sbcw21590 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 #sbcw21590 DN (please note that AlN submount numbering is A0TE2)

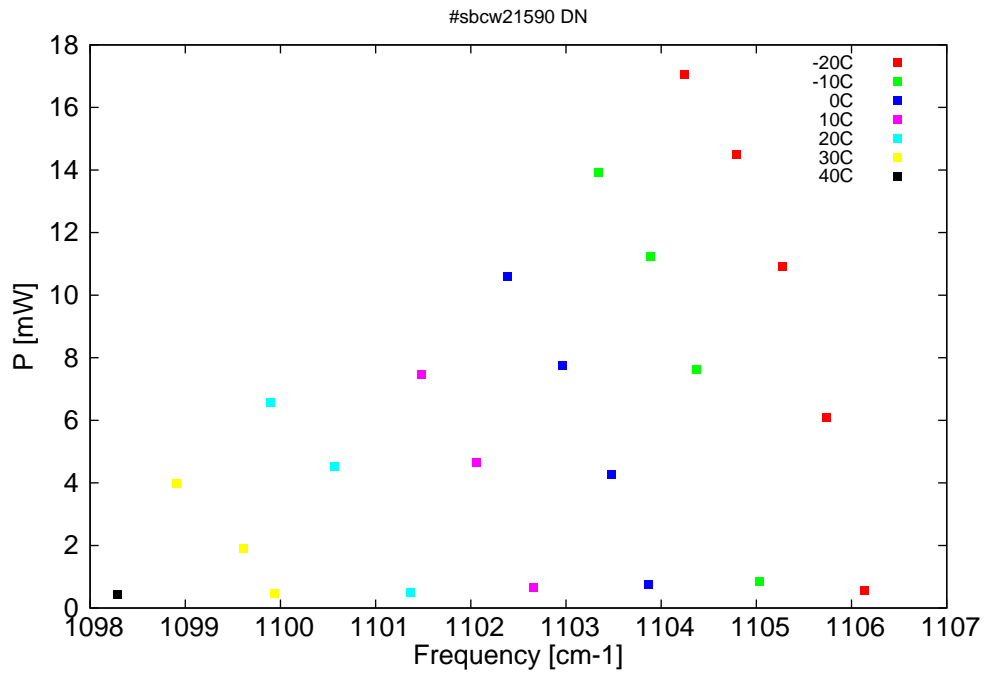


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

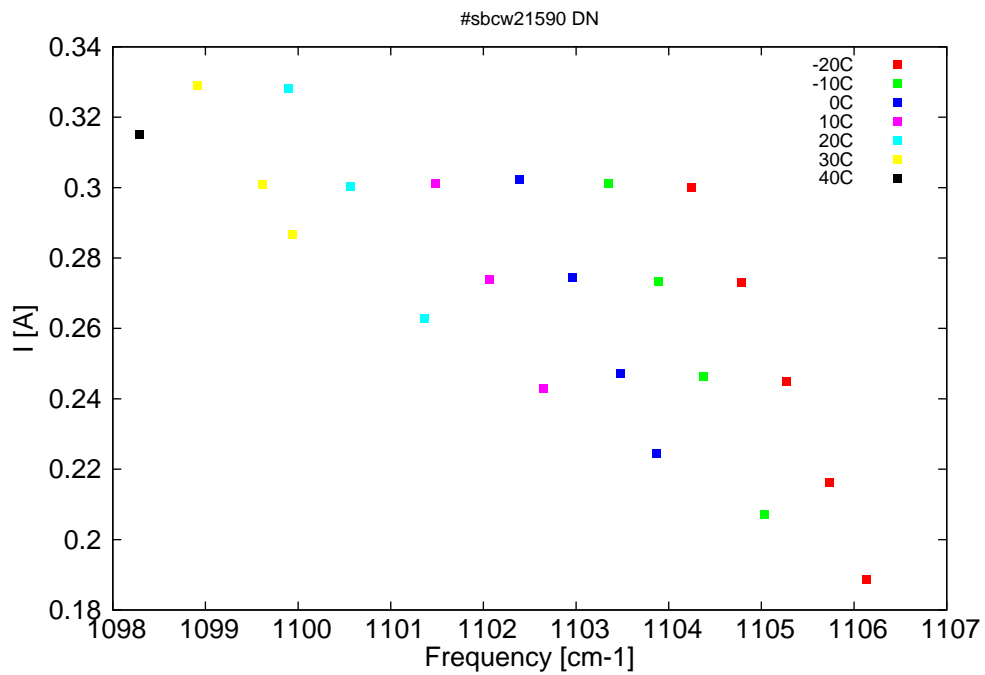


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9040.5	1106.1	0.6	-20	10.22	0.189
9043.8	1105.7	6.1	-20	10.63	0.216
9047.5	1105.3	10.9	-20	11.06	0.245
9051.5	1104.8	14.5	-20	11.47	0.273
9056	1104.2	17.1	-20	11.91	0.3
9049.5	1105	0.9	-10	10.4	0.207
9054.9	1104.4	7.6	-10	10.99	0.246
9058.9	1103.9	11.3	-10	11.39	0.273
9063.3	1103.3	13.9	-10	11.82	0.301
9059.1	1103.9	0.8	0	10.56	0.224
9062.3	1103.5	4.3	0	10.9	0.247
9066.5	1103	7.8	0	11.31	0.275
9071.2	1102.4	10.6	0	11.74	0.302
9069	1102.7	0.7	10	10.77	0.243
9073.9	1102.1	4.7	10	11.23	0.274
9078.7	1101.5	7.5	10	11.65	0.301
9079.6	1101.4	0.5	20	10.96	0.263
9086.2	1100.6	4.5	20	11.54	0.3
9091.8	1099.9	6.6	20	11.98	0.328
9091.4	1099.9	0.5	30	11.26	0.287
9094.1	1099.6	1.9	30	11.48	0.301
9099.9	1098.9	4	30	11.92	0.329
9105	1098.3	0.4	40	11.63	0.315

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

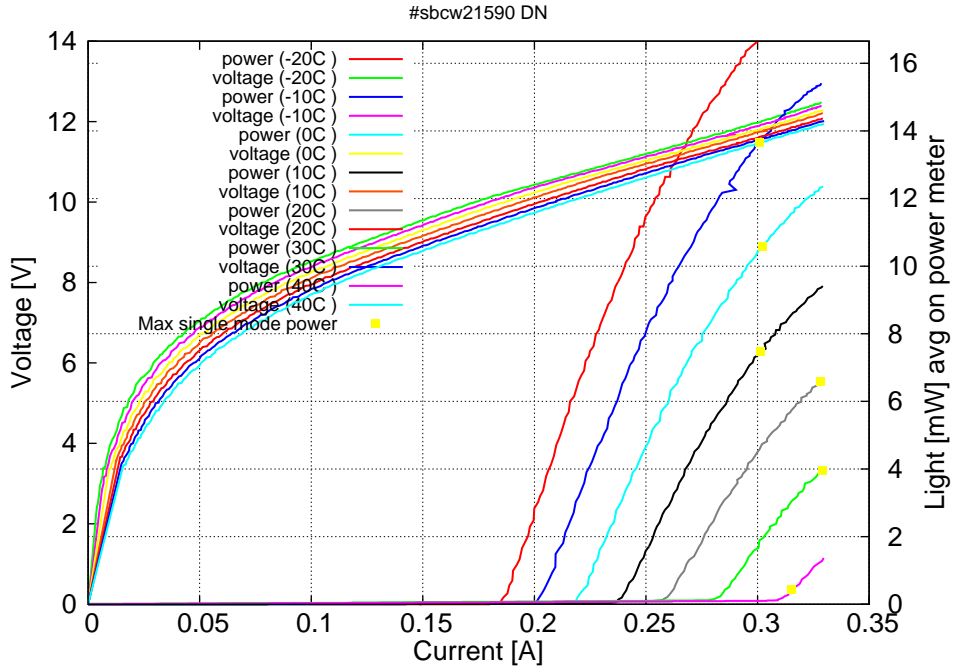


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=10.2V$ (2-wires measurements). Maximum operation current: 0.3A between -20C and 10C, 0.33A between 20C and 40C.

Figure 3: spectra at different temperatures for various DC currents

