

Datasheet for #sbcw21566 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 #sbcw21566 DN (please note that AlN submount numbering is A0TD2)

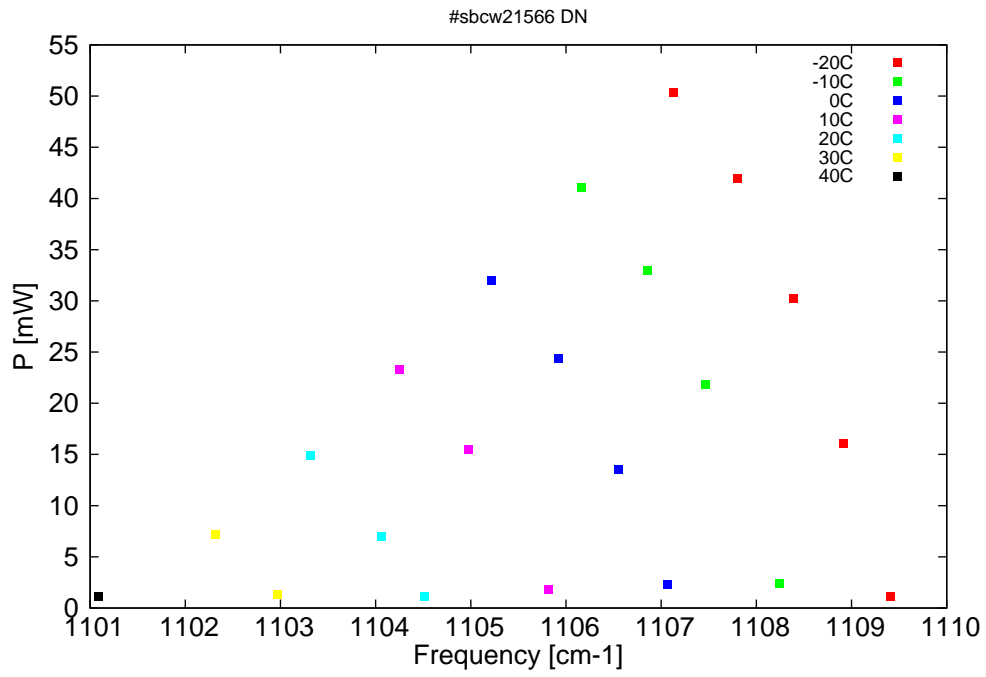


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

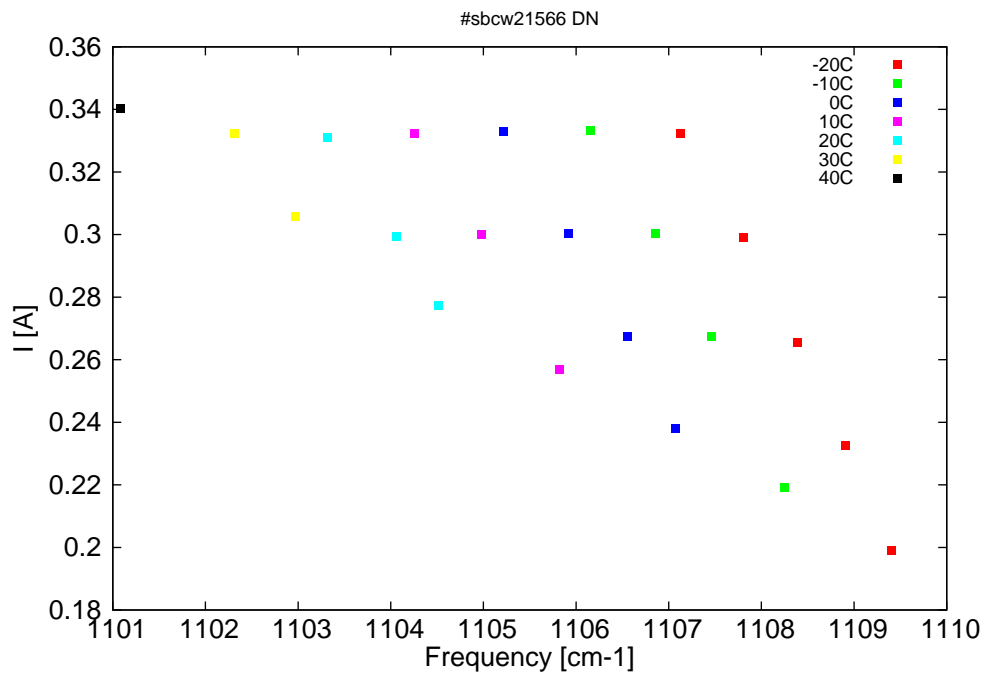


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9013.8	1109.4	1.1	-20	10.03	0.199
9017.8	1108.9	16	-20	10.49	0.233
9022.1	1108.4	30.2	-20	10.94	0.265
9026.9	1107.8	41.9	-20	11.4	0.299
9032.4	1107.1	50.4	-20	11.9	0.332
9023.3	1108.2	2.4	-10	10.23	0.219
9029.6	1107.5	21.8	-10	10.9	0.267
9034.6	1106.9	32.9	-10	11.36	0.3
9040.3	1106.2	41.1	-10	11.86	0.333
9032.8	1107.1	2.3	0	10.42	0.238
9037.1	1106.6	13.5	0	10.83	0.267
9042.3	1105.9	24.4	0	11.3	0.3
9048	1105.2	32	0	11.79	0.333
9043.1	1105.8	1.8	10	10.62	0.257
9049.9	1105	15.5	10	11.23	0.3
9055.9	1104.3	23.2	10	11.72	0.332
9053.7	1104.5	1.1	20	10.85	0.277
9057.4	1104.1	7	20	11.16	0.299
9063.6	1103.3	14.9	20	11.64	0.331
9066.5	1103	1.3	30	11.2	0.306
9071.8	1102.3	7.2	30	11.61	0.332
9081.9	1101.1	1.1	40	11.64	0.34

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

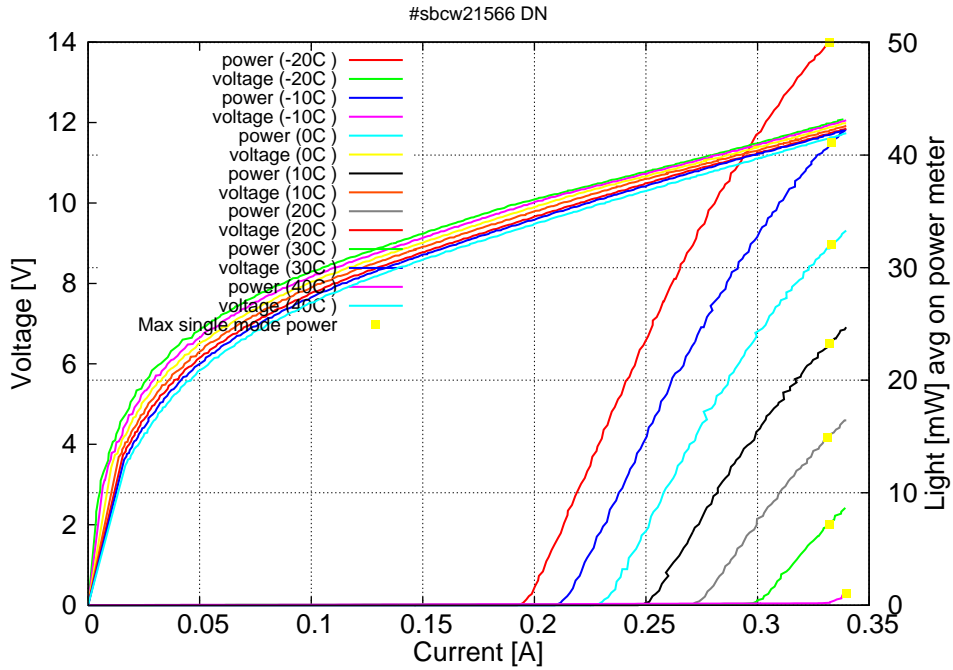


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=10.0V$ (2-wires measurements). Maximum operation current: 0.340A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

