

Datasheet for #sbcw13706 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 #sbcw13706 DN (please note that AlN submount numbering is A0829)

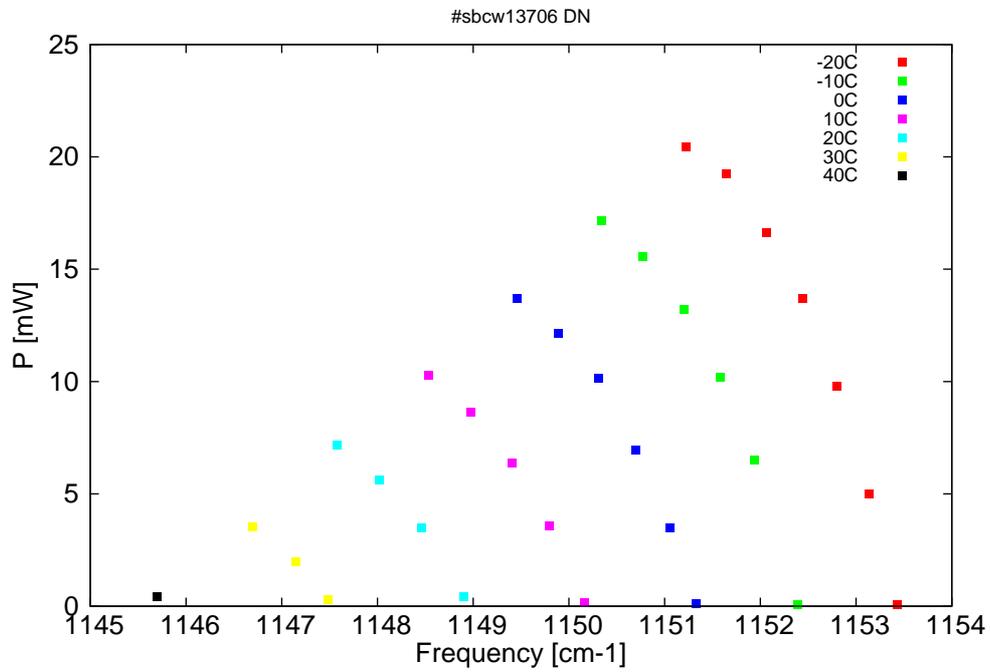


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

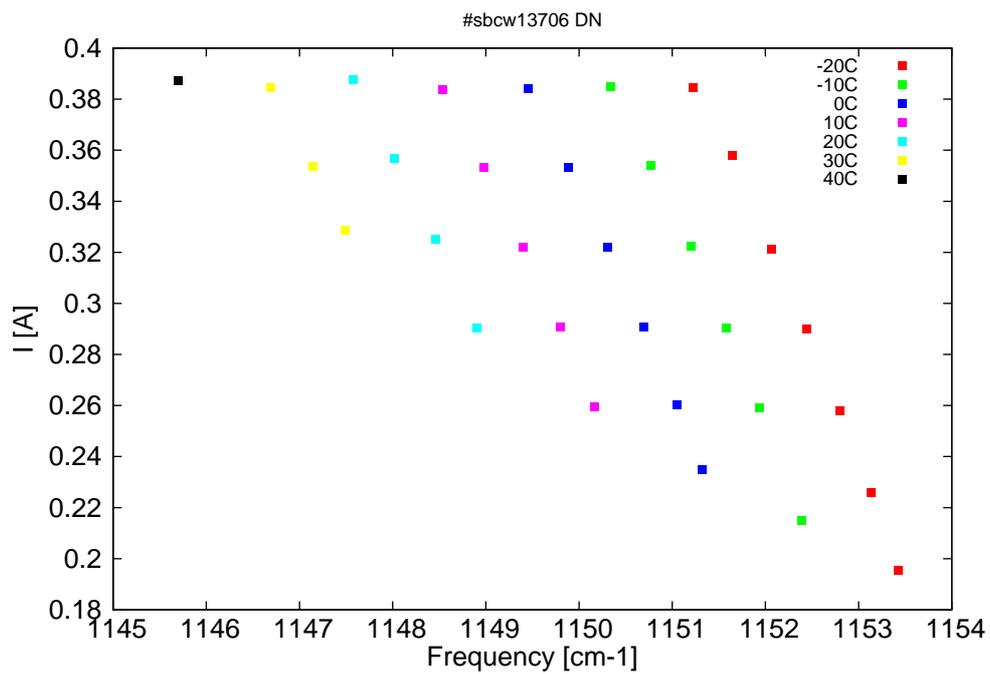


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8669.8	1153.4	0.1	-20	8.69	0.195
8672	1153.1	5	-20	9.04	0.226
8674.5	1152.8	9.8	-20	9.39	0.258
8677.2	1152.4	13.7	-20	9.74	0.29
8680.1	1152.1	16.6	-20	10.07	0.321
8683.2	1151.6	19.2	-20	10.41	0.358
8686.4	1151.2	20.4	-20	10.72	0.385
8677.6	1152.4	0.1	-10	8.74	0.215
8681	1151.9	6.5	-10	9.23	0.259
8683.7	1151.6	10.2	-10	9.57	0.29
8686.6	1151.2	13.2	-10	9.9	0.322
8689.8	1150.8	15.6	-10	10.22	0.354
8693	1150.3	17.2	-10	10.53	0.385
8685.6	1151.3	0.1	0	8.8	0.235
8687.7	1151.1	3.5	0	9.08	0.26
8690.4	1150.7	7	0	9.4	0.291
8693.3	1150.3	10.1	0	9.71	0.322
8696.5	1149.9	12.1	0	10.03	0.353
8699.8	1149.5	13.7	0	10.32	0.384
8694.4	1150.2	0.1	10	8.9	0.259
8697.2	1149.8	3.6	10	9.22	0.291
8700.2	1149.4	6.4	10	9.54	0.322
8703.4	1149	8.6	10	9.84	0.353
8706.7	1148.5	10.3	10	10.13	0.384
8703.9	1148.9	0.4	20	9.06	0.29
8707.3	1148.5	3.5	20	9.4	0.325
8710.6	1148	5.6	20	9.7	0.357
8714	1147.6	7.2	20	9.98	0.388
8714.7	1147.5	0.3	30	9.26	0.329
8717.3	1147.1	2	30	9.5	0.354
8720.7	1146.7	3.6	30	9.77	0.384
8728.3	1145.7	0.4	40	9.63	0.387

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

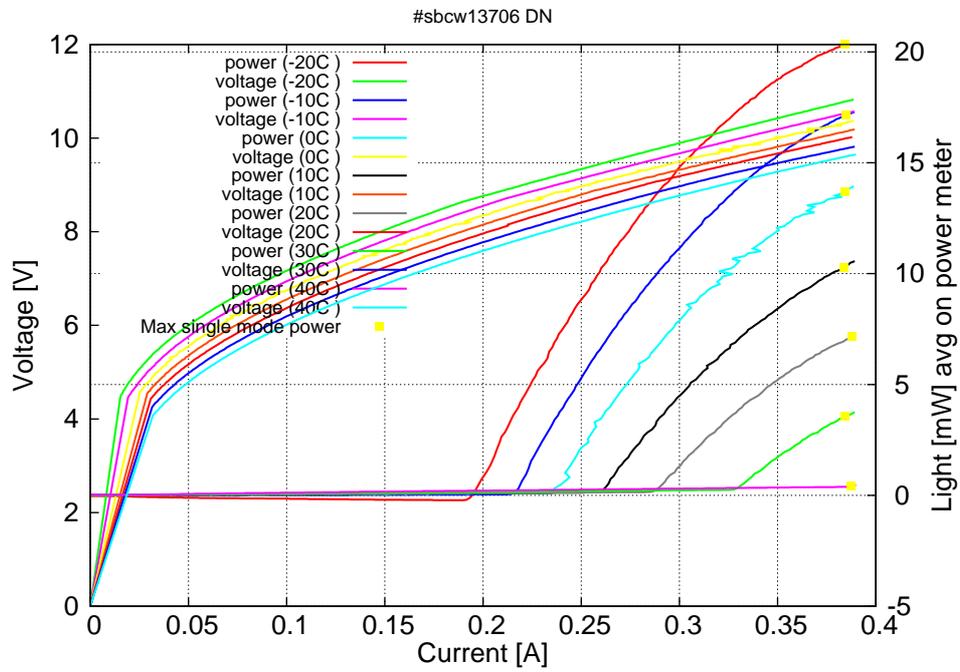


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.39A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

