

Datasheet for #sbcw23700 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

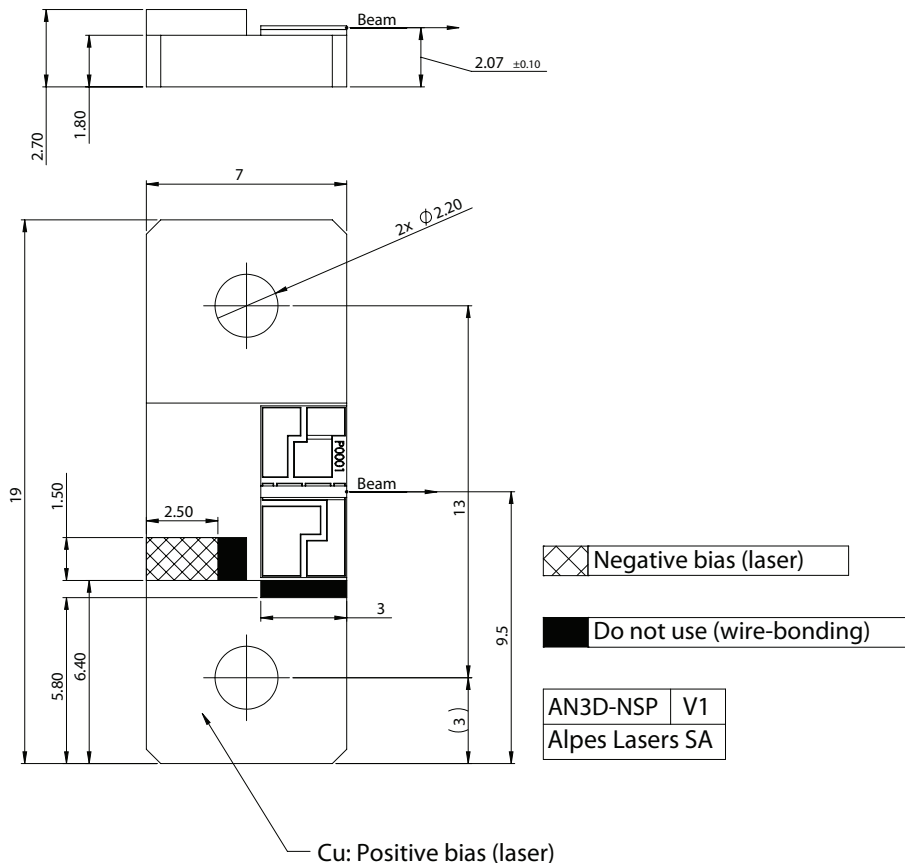


Figure 1: Mechanical and electrical interface for #sbcw23700 DN

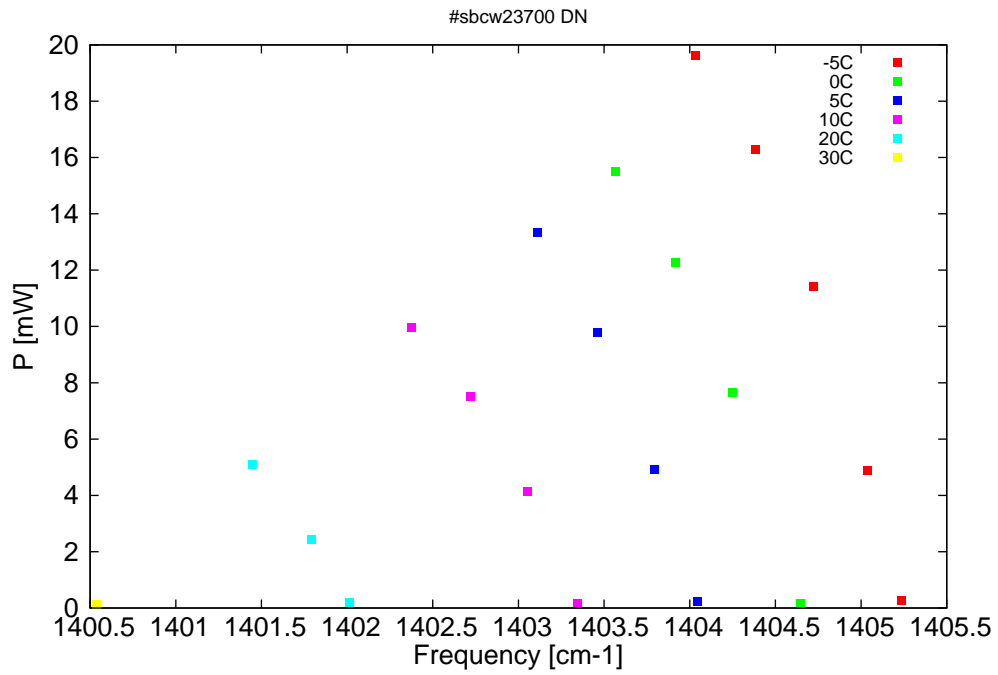


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

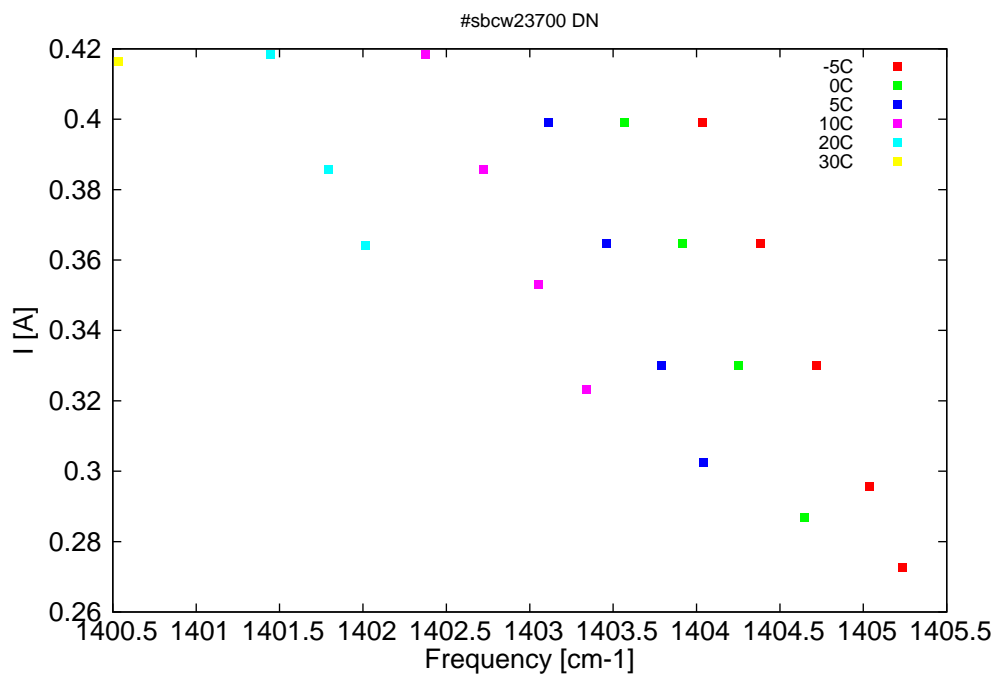


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7116.3	1405.2	0.3	-5	9.73	0.273
7117.3	1405	4.9	-5	9.9	0.296
7118.9	1404.7	11.4	-5	10.15	0.33
7120.5	1404.4	16.3	-5	10.4	0.365
7122.3	1404	19.6	-5	10.64	0.399
7119.2	1404.6	0.2	0	9.76	0.287
7121.2	1404.3	7.7	0	10.08	0.33
7122.9	1403.9	12.3	0	10.32	0.365
7124.7	1403.6	15.5	0	10.56	0.399
7122.3	1404	0.2	5	9.81	0.303
7123.6	1403.8	4.9	5	10	0.33
7125.2	1403.5	9.8	5	10.24	0.365
7127	1403.1	13.3	5	10.48	0.399
7125.8	1403.3	0.2	10	9.84	0.323
7127.3	1403.1	4.1	10	10.05	0.353
7129	1402.7	7.5	10	10.27	0.386
7130.8	1402.4	10	10	10.49	0.419
7132.6	1402	0.2	20	9.98	0.364
7133.7	1401.8	2.4	20	10.12	0.386
7135.5	1401.4	5.1	20	10.33	0.419
7140.1	1400.5	0.1	30	10.17	0.416

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

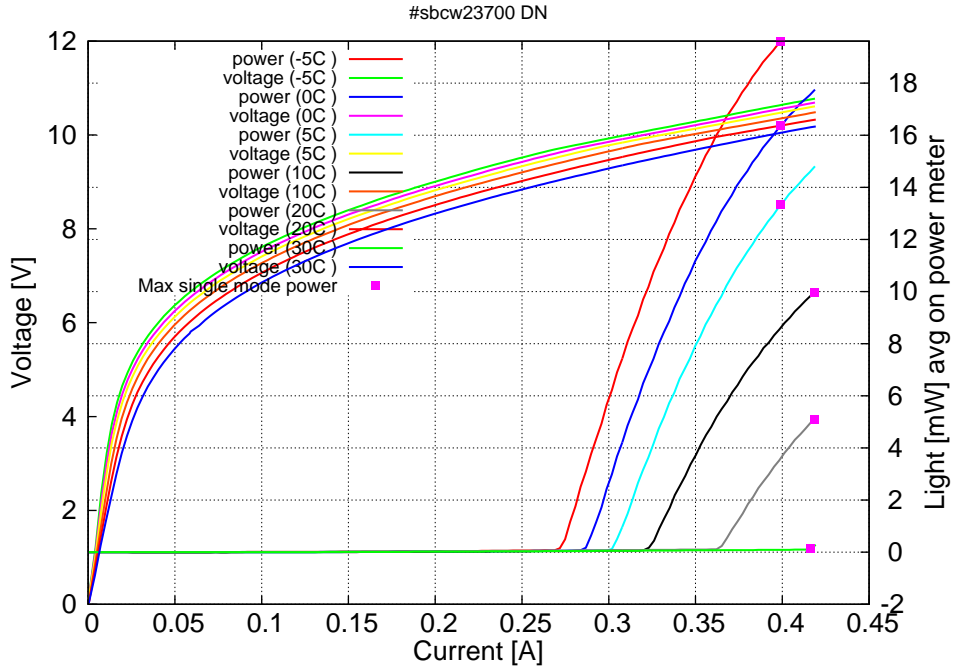


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -5C: $I_{th}=0.27A$ / $V_{th}=9.7V$ (2-wires measurements). Maximum operation cur-

rent: 0.4A between -5C and 5C, 0.42A between 10C and 30C.

Figure 3: spectra at different temperatures for various DC currents

