

Datasheet for #sbcw8580 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.

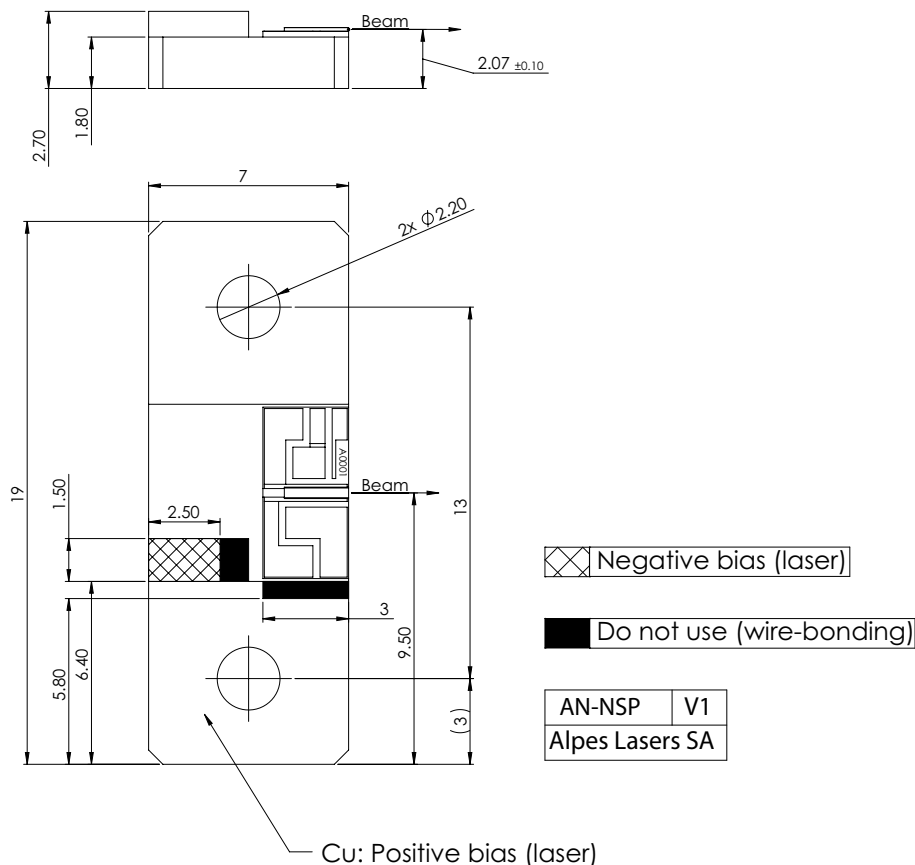


Figure 1: Mechanical and electrical interface for #sbcw8580 DN

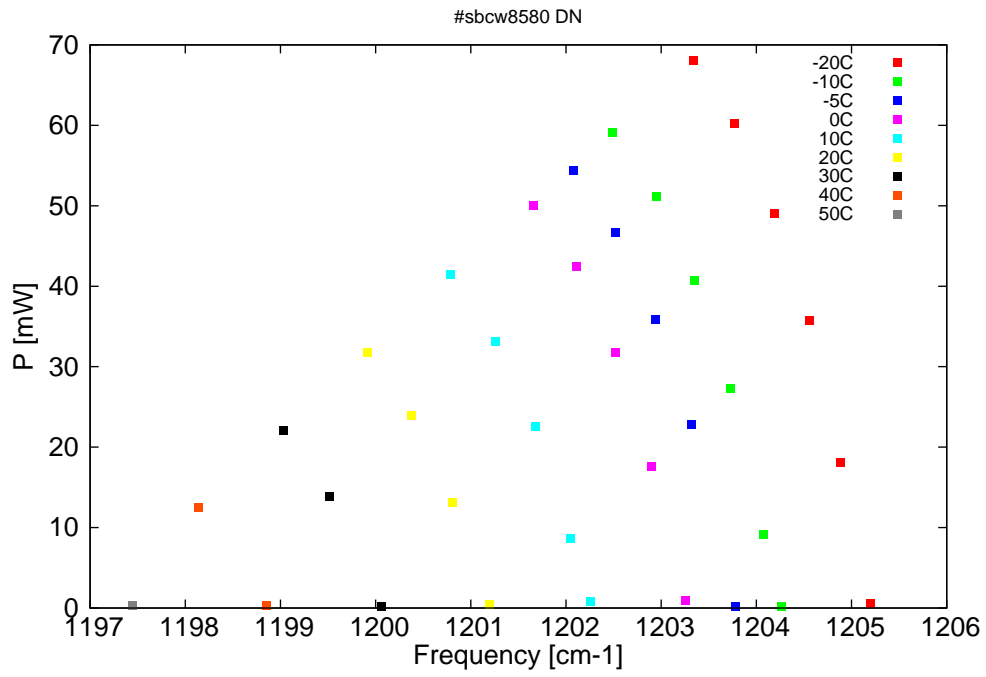


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

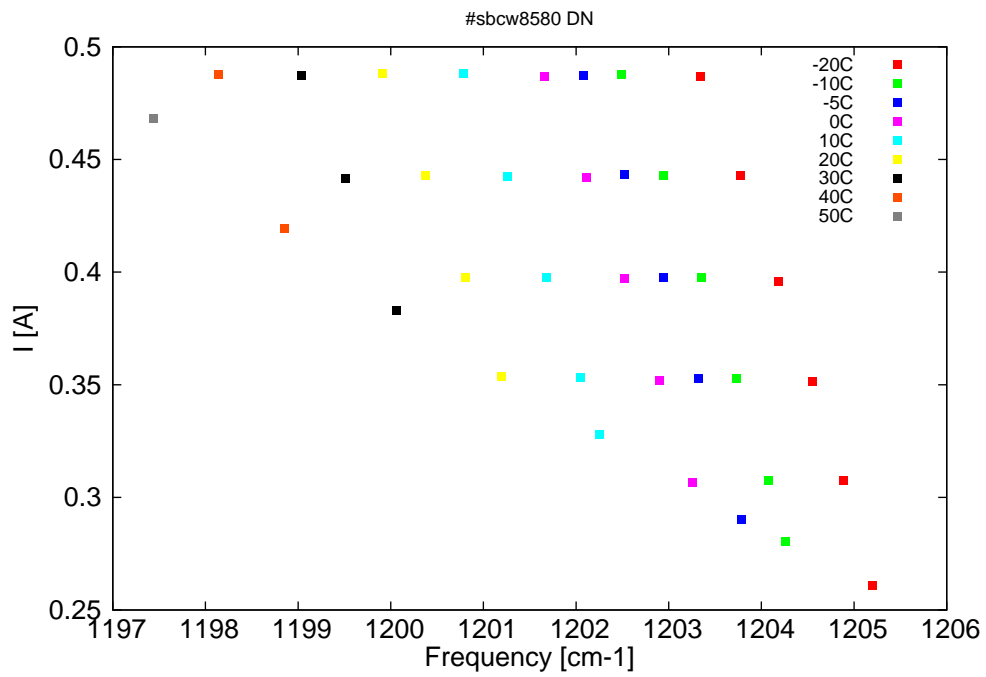


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8297.4	1205.2	0.5	-20	8.4	0.261
8299.5	1204.9	18	-20	8.7	0.307
8301.8	1204.6	35.8	-20	9	0.351
8304.4	1204.2	49.1	-20	9.31	0.396
8307.2	1203.8	60.2	-20	9.62	0.443
8310.2	1203.3	68.1	-20	9.92	0.487
8303.9	1204.3	0.2	-10	8.44	0.28
8305.1	1204.1	9.1	-10	8.63	0.308
8307.5	1203.7	27.3	-10	8.93	0.353
8310.1	1203.4	40.8	-10	9.24	0.397
8312.9	1202.9	51.2	-10	9.54	0.443
8316.1	1202.5	59.2	-10	9.85	0.488
8307.1	1203.8	0.2	-5	8.47	0.29
8310.4	1203.3	22.8	-5	8.89	0.353
8313	1202.9	35.8	-5	9.2	0.397
8315.9	1202.5	46.7	-5	9.51	0.444
8318.9	1202.1	54.4	-5	9.82	0.487
8310.8	1203.3	0.9	0	8.55	0.306
8313.2	1202.9	17.6	0	8.85	0.352
8315.9	1202.5	31.7	0	9.16	0.397
8318.7	1202.1	42.4	0	9.47	0.442
8321.8	1201.7	50	0	9.78	0.487
8317.7	1202.3	0.8	10	8.63	0.328
8319.1	1202.1	8.6	10	8.8	0.353
8321.7	1201.7	22.5	10	9.1	0.398
8324.6	1201.3	33.1	10	9.4	0.442
8327.9	1200.8	41.4	10	9.72	0.488
8325.1	1201.2	0.5	20	8.74	0.353
8327.7	1200.8	13.1	20	9.04	0.398
8330.7	1200.4	23.9	20	9.34	0.443
8333.9	1199.9	31.7	20	9.65	0.488
8332.9	1200.1	0.2	30	8.88	0.383
8336.7	1199.5	13.8	30	9.27	0.442
8340	1199	22	30	9.59	0.487
8341.3	1198.9	0.3	40	9.07	0.419
8346.2	1198.1	12.5	40	9.53	0.488
8351.1	1197.4	0.3	50	9.35	0.468

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

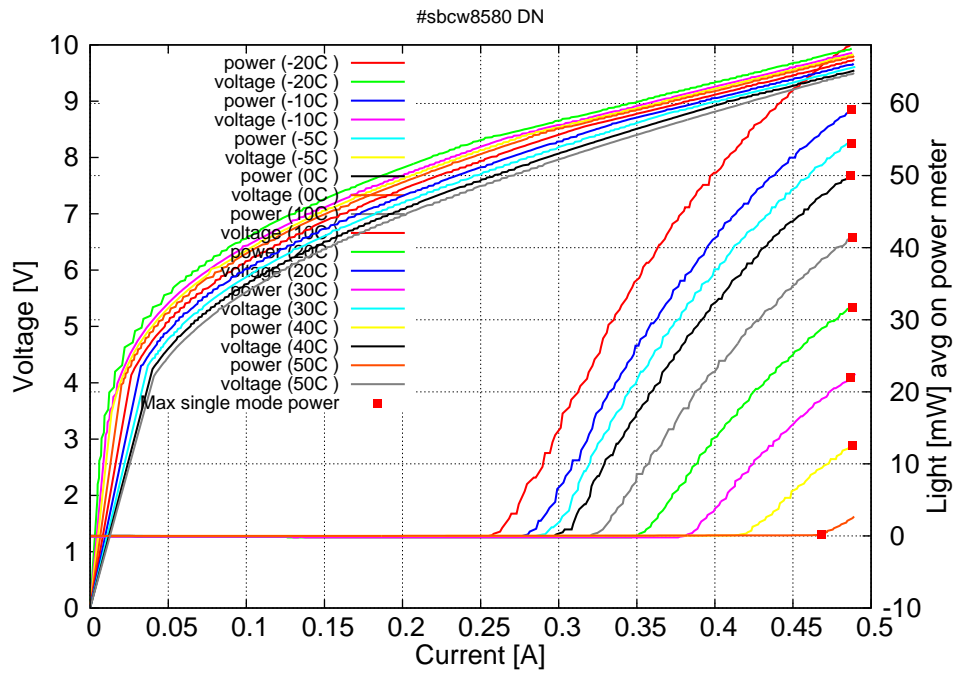


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.26A$ / $V_{th}=8.4V$ (2-wires measurements). Maximum operation current: 0.49A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

