

Datasheet for #sbcw12404 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.

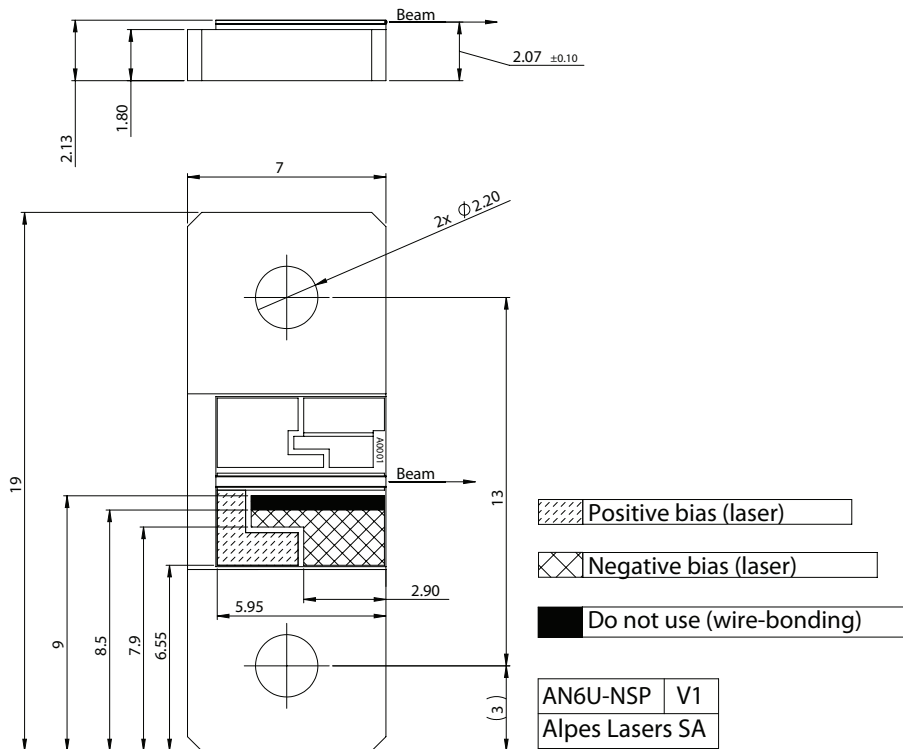


Figure 1: Mechanical and electrical interface for #sbcw12404 DN

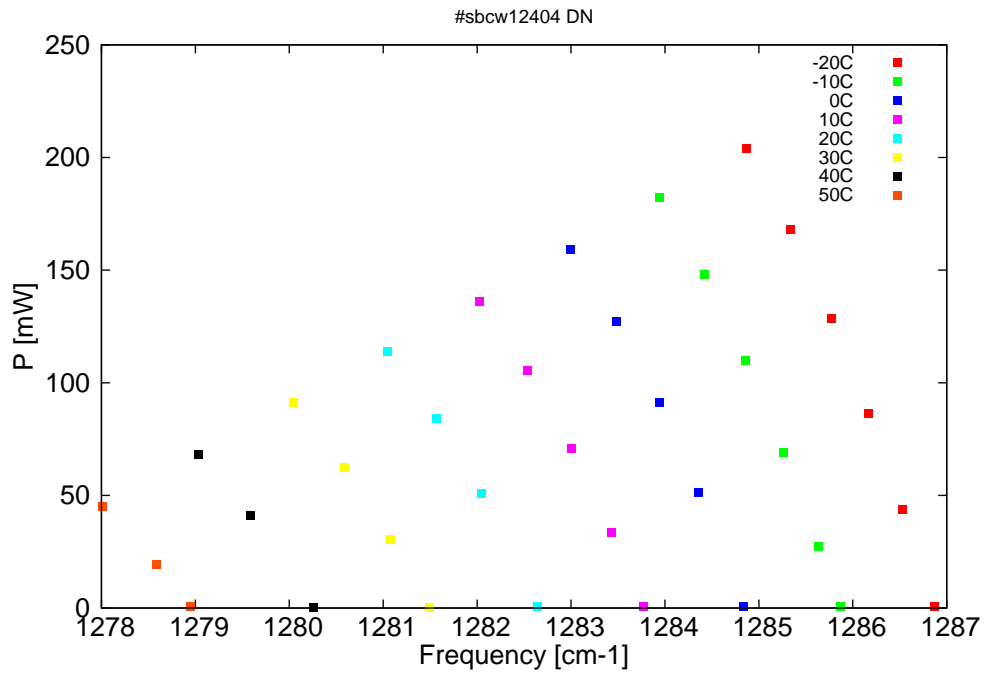


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

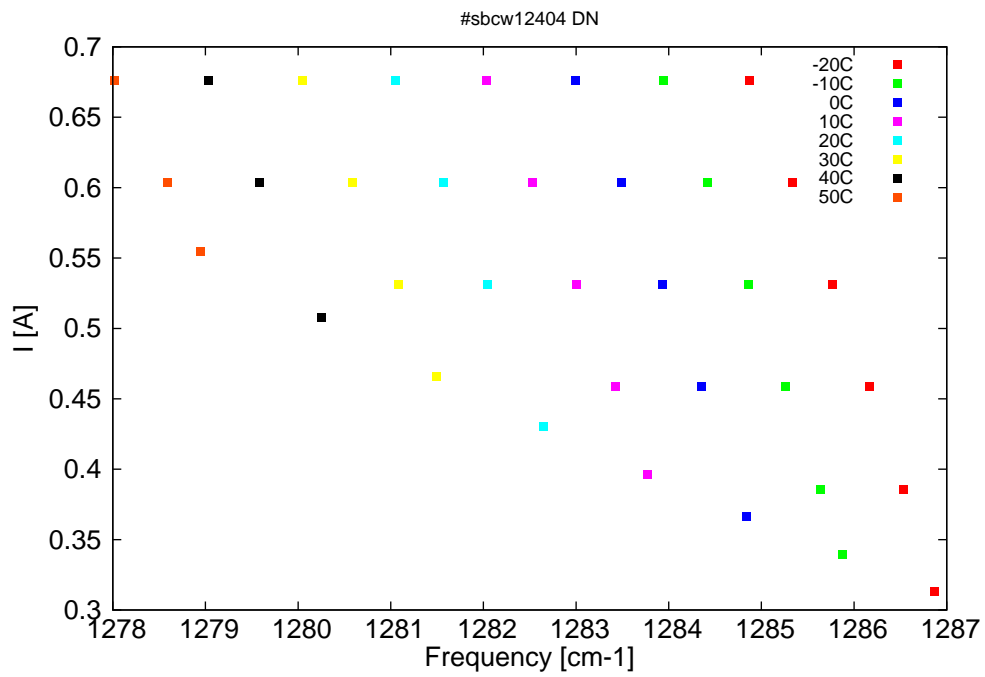


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7770.8	1286.9	0.6	-20	7.95	0.313
7772.8	1286.5	43.7	-20	8.21	0.386
7775.1	1286.2	86.5	-20	8.44	0.459
7777.4	1285.8	128.3	-20	8.68	0.531
7780	1285.3	167.9	-20	8.9	0.604
7782.9	1284.9	203.9	-20	9.12	0.676
7776.8	1285.9	0.7	-10	7.96	0.339
7778.2	1285.6	27.4	-10	8.12	0.386
7780.5	1285.3	69.2	-10	8.35	0.459
7783	1284.9	109.9	-10	8.58	0.531
7785.6	1284.4	147.9	-10	8.81	0.604
7788.5	1283.9	182.3	-10	9.03	0.676
7783.1	1284.8	0.5	0	7.97	0.366
7786	1284.4	51.5	0	8.28	0.459
7788.5	1283.9	91	0	8.5	0.531
7791.3	1283.5	127.3	0	8.74	0.604
7794.3	1283	159.4	0	8.96	0.676
7789.6	1283.8	0.6	10	8.01	0.397
7791.6	1283.4	33.5	10	8.21	0.459
7794.2	1283	71.1	10	8.44	0.531
7797.1	1282.5	105.6	10	8.67	0.604
7800.1	1282	136.3	10	8.9	0.676
7796.4	1282.6	0.6	20	8.07	0.43
7800	1282	50.8	20	8.4	0.531
7802.9	1281.6	84.2	20	8.63	0.604
7806.1	1281	114	20	8.86	0.676
7803.4	1281.5	0.4	30	8.15	0.466
7805.9	1281.1	30.6	30	8.35	0.531
7808.9	1280.6	62.6	30	8.58	0.604
7812.2	1280	91.3	30	8.83	0.676
7810.9	1280.3	0.4	40	8.24	0.508
7815	1279.6	41.1	40	8.56	0.604
7818.4	1279	68.2	40	8.8	0.676
7818.9	1278.9	0.5	50	8.36	0.554
7821.1	1278.6	19.5	50	8.52	0.604
7824.6	1278	45	50	8.75	0.676

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

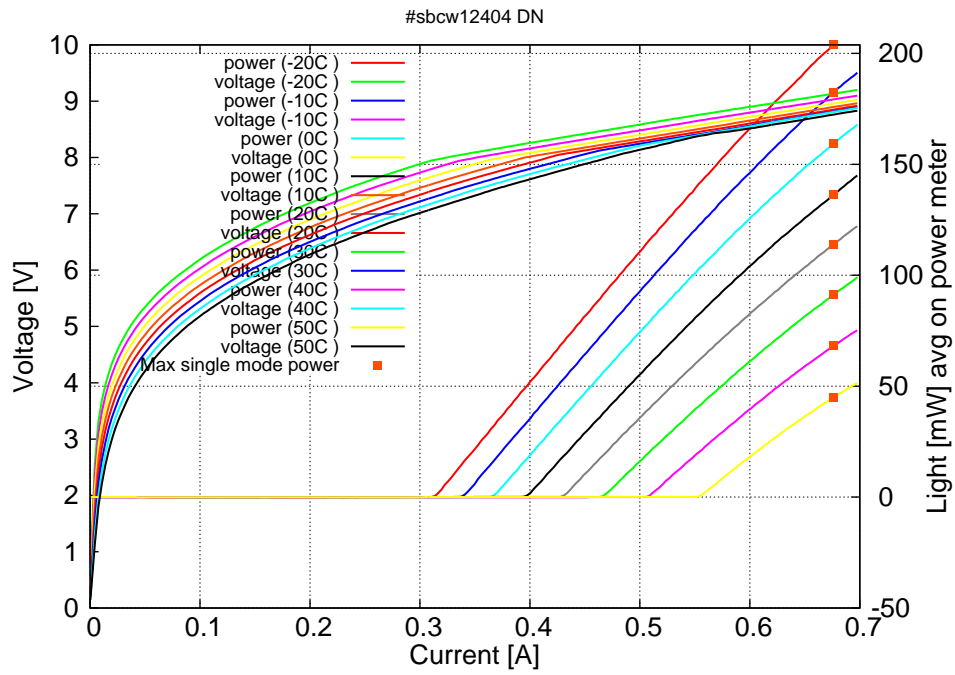


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.31A$ / $V_{th}=8.0V$ (2-wires measurements). Maximum operation current: 0.70A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

