

Datasheet for #sbcw8591 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.

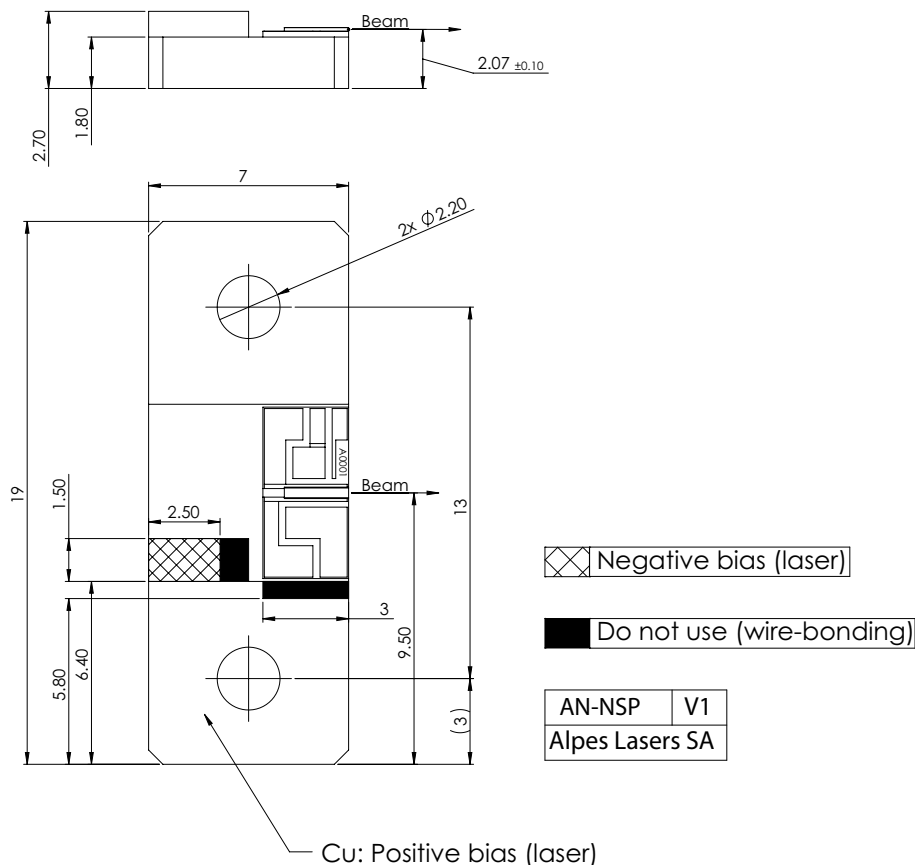


Figure 1: Mechanical and electrical interface for #sbcw8591 DN

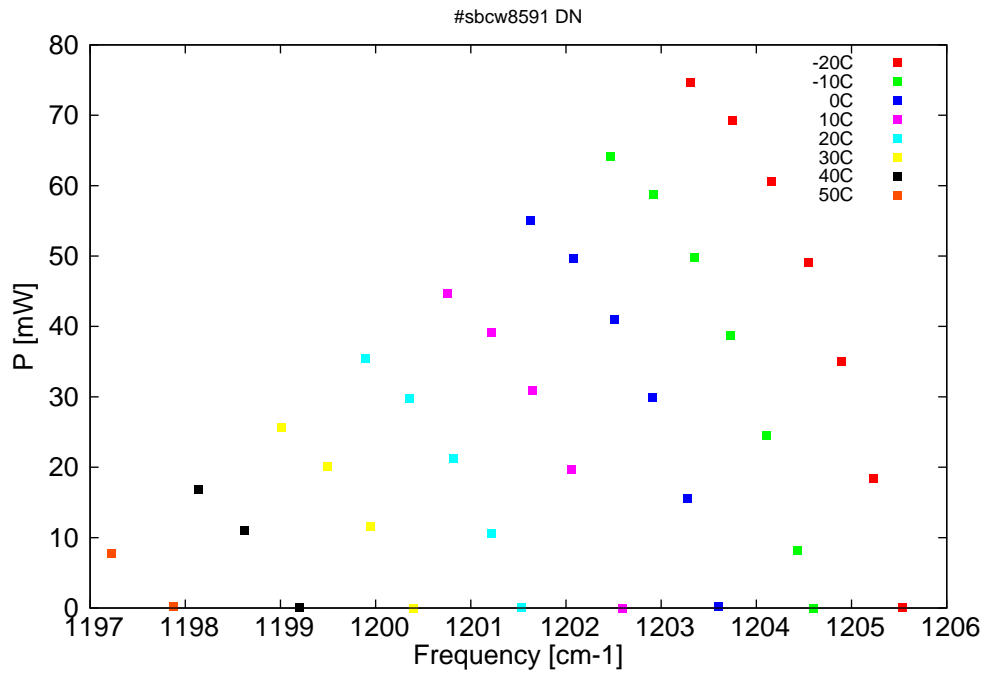


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

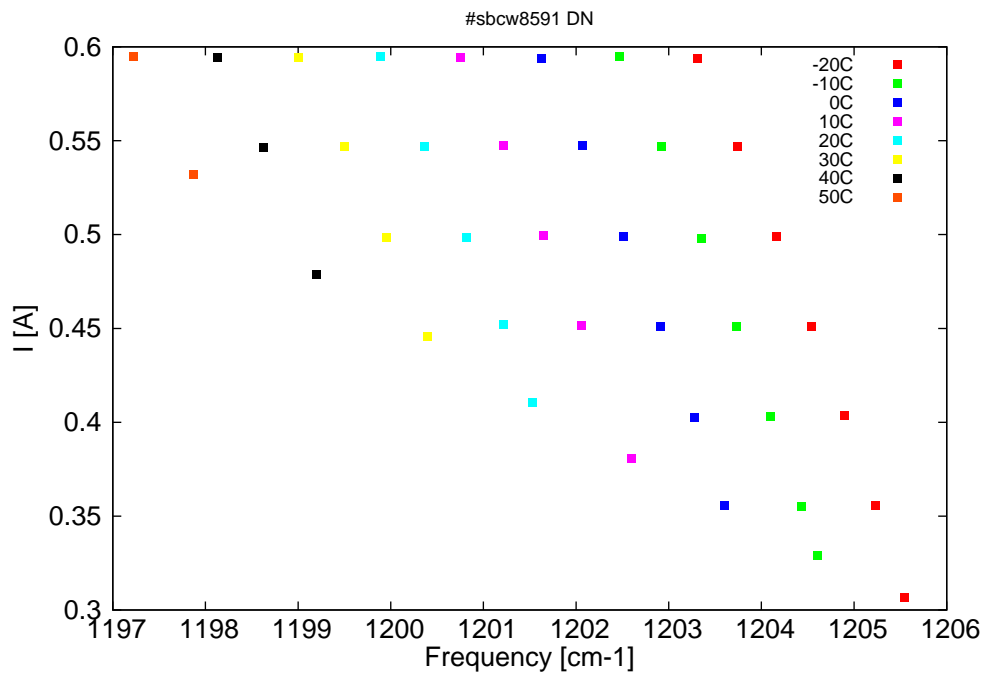


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8295	1205.5	0.1	-20	8.41	0.307
8297.2	1205.2	18.4	-20	8.68	0.356
8299.5	1204.9	35	-20	8.94	0.404
8301.9	1204.5	49.1	-20	9.2	0.451
8304.5	1204.2	60.6	-20	9.47	0.499
8307.4	1203.7	69.2	-20	9.74	0.547
8310.4	1203.3	74.6	-20	10.01	0.594
8301.5	1204.6	0	-10	8.45	0.329
8302.7	1204.4	8.2	-10	8.6	0.355
8304.9	1204.1	24.6	-10	8.86	0.403
8307.5	1203.7	38.8	-10	9.13	0.451
8310.1	1203.4	49.8	-10	9.39	0.498
8313.1	1202.9	58.7	-10	9.67	0.547
8316.2	1202.5	64.1	-10	9.95	0.595
8308.4	1203.6	0.2	0	8.54	0.356
8310.6	1203.3	15.5	0	8.79	0.402
8313.2	1202.9	29.9	0	9.06	0.451
8316	1202.5	41.1	0	9.33	0.499
8319	1202.1	49.7	0	9.61	0.548
8322	1201.6	55.1	0	9.88	0.594
8315.4	1202.6	0	10	8.61	0.381
8319.1	1202.1	19.7	10	9	0.451
8321.9	1201.7	30.9	10	9.27	0.5
8324.9	1201.2	39.1	10	9.54	0.547
8328.1	1200.8	44.7	10	9.82	0.594
8322.7	1201.5	0.1	20	8.71	0.411
8324.9	1201.2	10.6	20	8.94	0.452
8327.7	1200.8	21.2	20	9.2	0.498
8330.8	1200.4	29.8	20	9.48	0.547
8334.1	1199.9	35.5	20	9.76	0.595
8330.6	1200.4	0	30	8.85	0.446
8333.7	1200	11.6	30	9.14	0.498
8336.8	1199.5	20.1	30	9.42	0.547
8340.2	1199	25.7	30	9.7	0.595
8338.9	1199.2	0.1	40	9.01	0.479
8342.9	1198.6	11.1	40	9.36	0.546
8346.3	1198.1	16.8	40	9.64	0.595
8348.1	1197.9	0.3	50	9.22	0.532
8352.6	1197.2	7.7	50	9.58	0.595

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

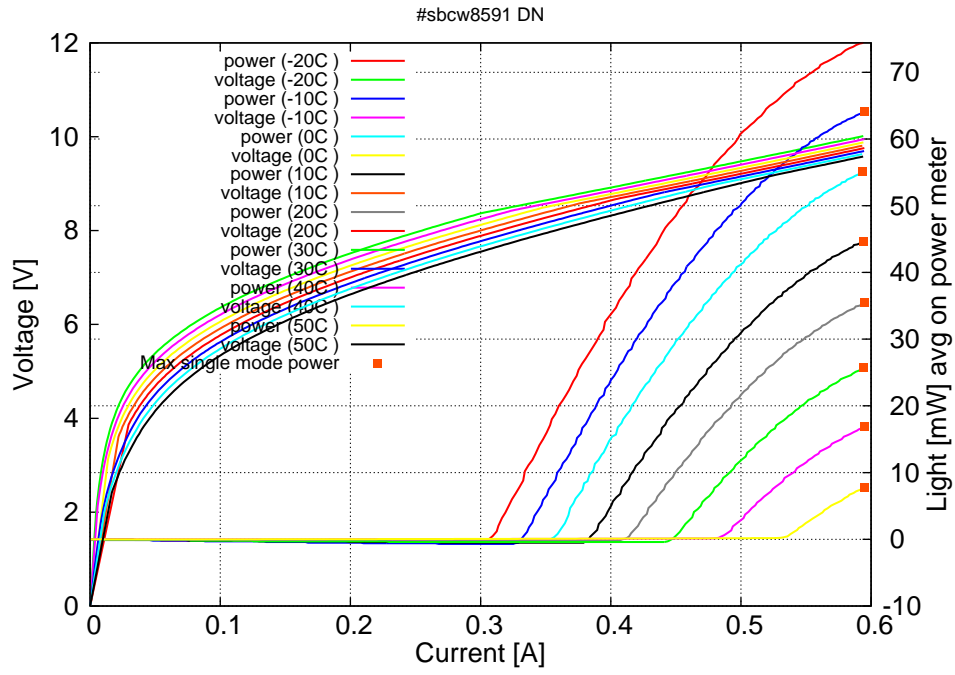


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.30A$ / $V_{th}=8.4V$ (2-wires measurements). Maximum operation current: 0.595A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

