

Datasheet for #sbcw852 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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.

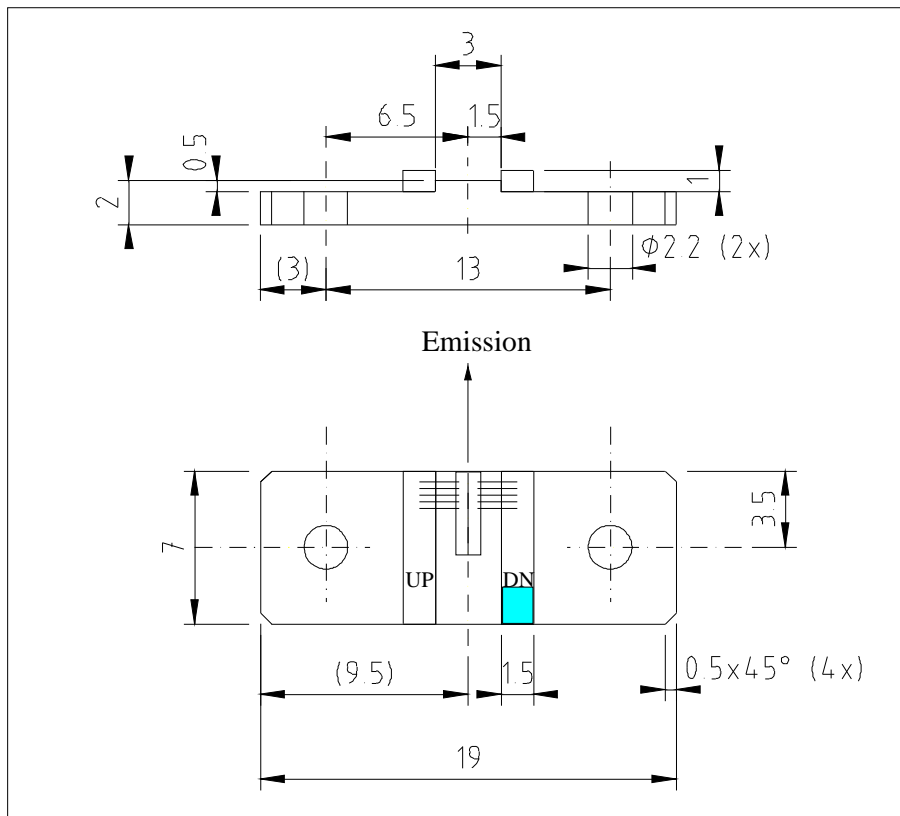


Figure 1: Mechanical and electrical interface for #sbcw852 DN (please note that the laser is connected to the DN pad drawn in blue)

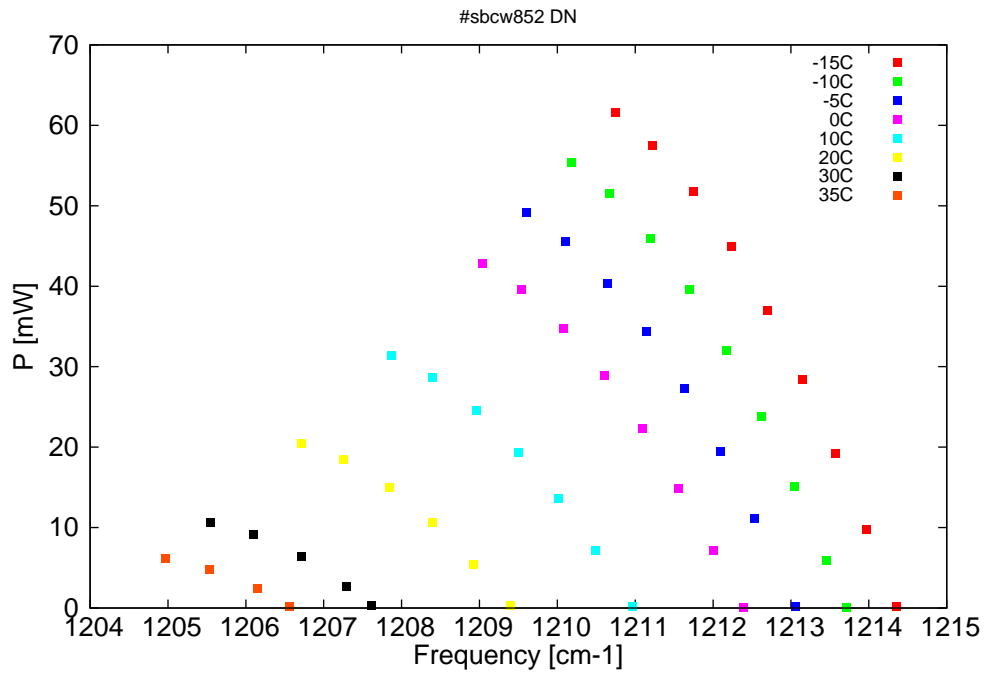


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

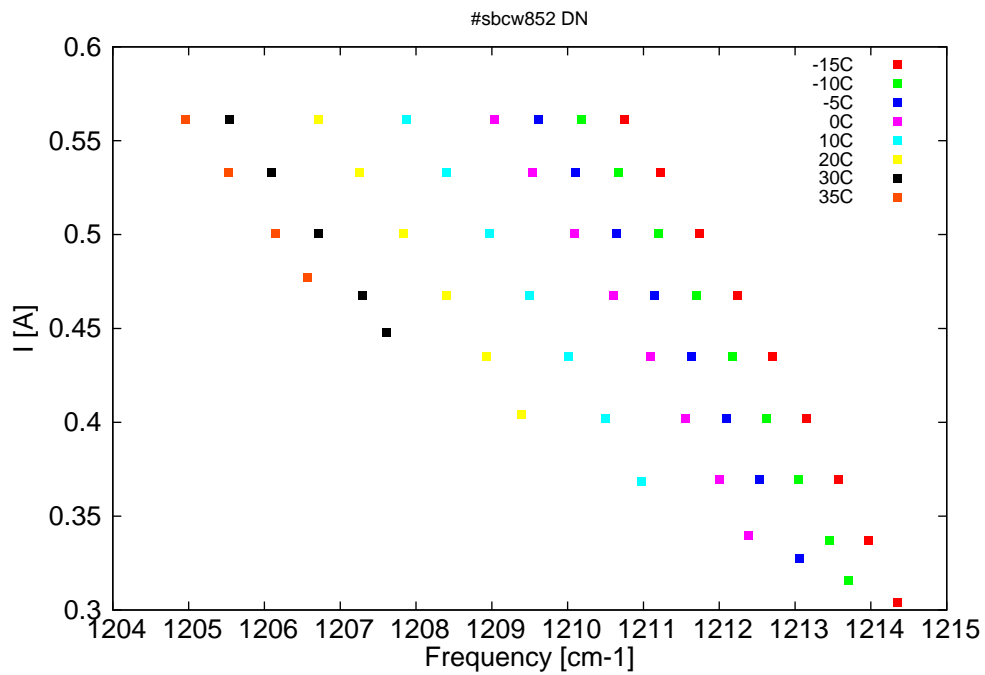


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8234.9	1214.4	0.2	-15	8.1	0.304
8237.4	1214	9.7	-15	8.23	0.337
8240.2	1213.6	19.2	-15	8.37	0.37
8243	1213.1	28.4	-15	8.5	0.402
8246	1212.7	37	-15	8.64	0.435
8249.2	1212.2	45	-15	8.78	0.468
8252.6	1211.7	51.8	-15	8.93	0.5
8256.1	1211.2	57.5	-15	9.08	0.533
8259.3	1210.8	61.6	-15	9.21	0.562
8239.2	1213.7	0.1	-10	8.11	0.316
8240.9	1213.5	5.9	-10	8.2	0.337
8243.7	1213	15.1	-10	8.34	0.37
8246.6	1212.6	23.8	-10	8.47	0.402
8249.7	1212.2	32	-10	8.62	0.435
8252.9	1211.7	39.6	-10	8.76	0.468
8256.3	1211.2	46	-10	8.91	0.5
8259.9	1210.7	51.5	-10	9.06	0.533
8263.2	1210.2	55.3	-10	9.2	0.562
8243.7	1213.1	0.1	-5	8.13	0.328
8247.2	1212.5	11.1	-5	8.31	0.37
8250.2	1212.1	19.5	-5	8.45	0.402
8253.3	1211.6	27.3	-5	8.59	0.435
8256.6	1211.1	34.4	-5	8.74	0.468
8260.1	1210.6	40.4	-5	8.89	0.5
8263.8	1210.1	45.6	-5	9.04	0.533
8267.1	1209.6	49.2	-5	9.18	0.562
8248.2	1212.4	0	0	8.15	0.34
8250.8	1212	7.1	0	8.28	0.37
8253.8	1211.6	14.9	0	8.42	0.402
8257	1211.1	22.3	0	8.57	0.435
8260.3	1210.6	28.9	0	8.72	0.468
8263.9	1210.1	34.7	0	8.87	0.5
8267.6	1209.5	39.5	0	9.03	0.533
8271.1	1209	42.8	0	9.17	0.562
8257.9	1211	0.2	10	8.22	0.369
8261.1	1210.5	7.2	10	8.38	0.402
8264.4	1210	13.6	10	8.52	0.435
8267.9	1209.5	19.4	10	8.68	0.468
8271.5	1209	24.5	10	8.84	0.5
8275.4	1208.4	28.7	10	9	0.533
8279	1207.9	31.4	10	9.14	0.562
8268.6	1209.4	0.3	20	8.34	0.404
8271.8	1208.9	5.4	20	8.48	0.435
8275.4	1208.4	10.6	20	8.64	0.468
8279.2	1207.8	14.9	20	8.8	0.5
8283.3	1207.3	18.4	20	8.97	0.533
8287	1206.7	20.5	20	9.12	0.562
8280.8	1207.6	0.3	30	8.51	0.448
8283	1207.3	2.7	30	8.61	0.468

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8287	1206.7	6.3	30	8.78	0.5
8291.2	1206.1	9.1	30	8.95	0.533
8295	1205.5	10.6	30	9.1	0.562
8288	1206.6	0.3	35	8.64	0.477
8290.8	1206.2	2.4	35	8.76	0.5
8295.1	1205.5	4.8	35	8.93	0.533
8299	1205	6.1	35	9.09	0.562

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

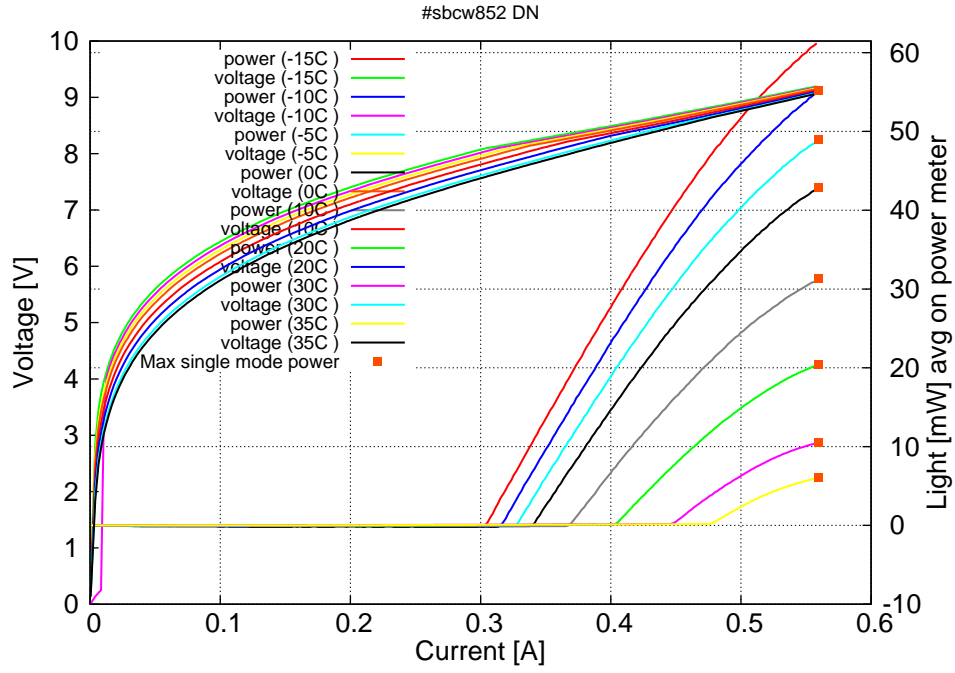


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -15C: $I_{th}=0.30A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.56A for all temperatures.

