

Datasheet for #sbcw4345 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.

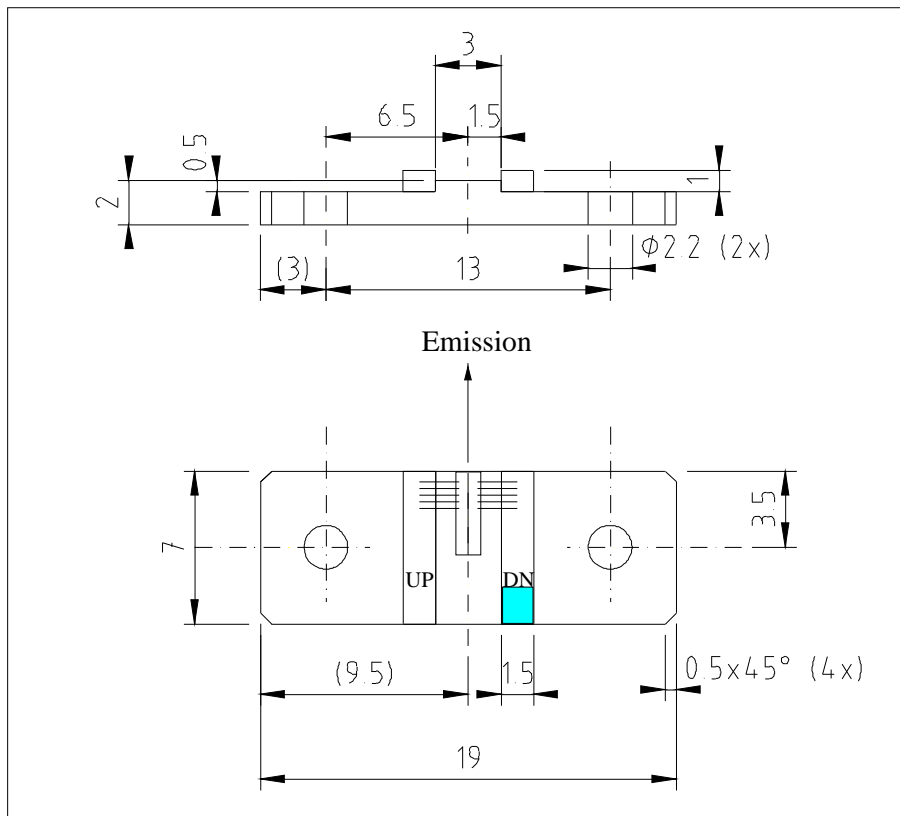


Figure 1: Mechanical and electrical interface for #sbcw4345 DN (please note that the laser is connected to the DN pad drawn in blue)

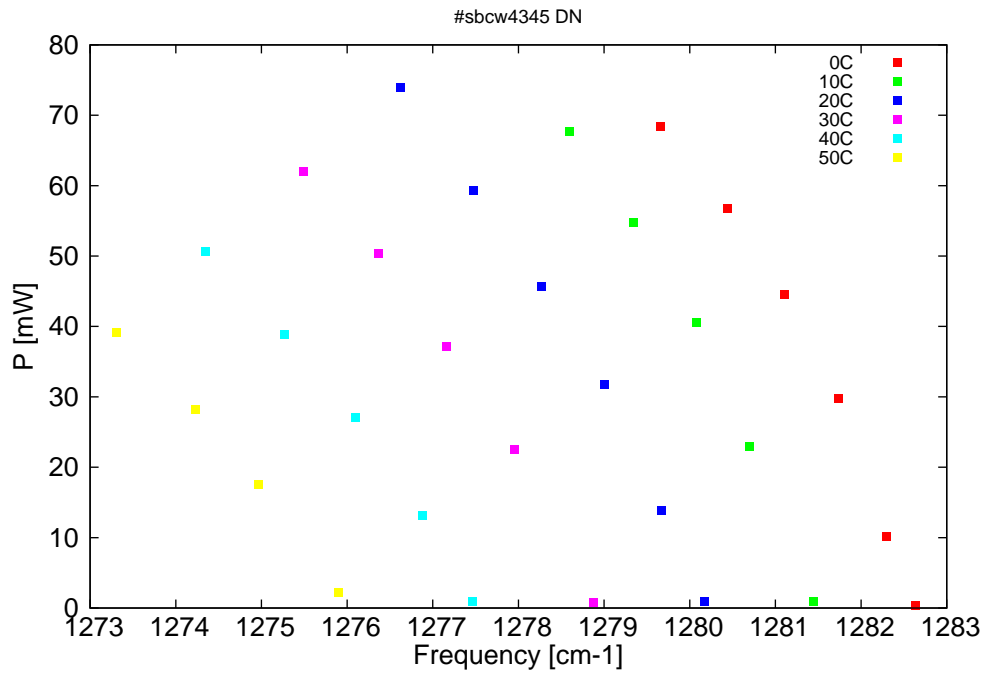


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

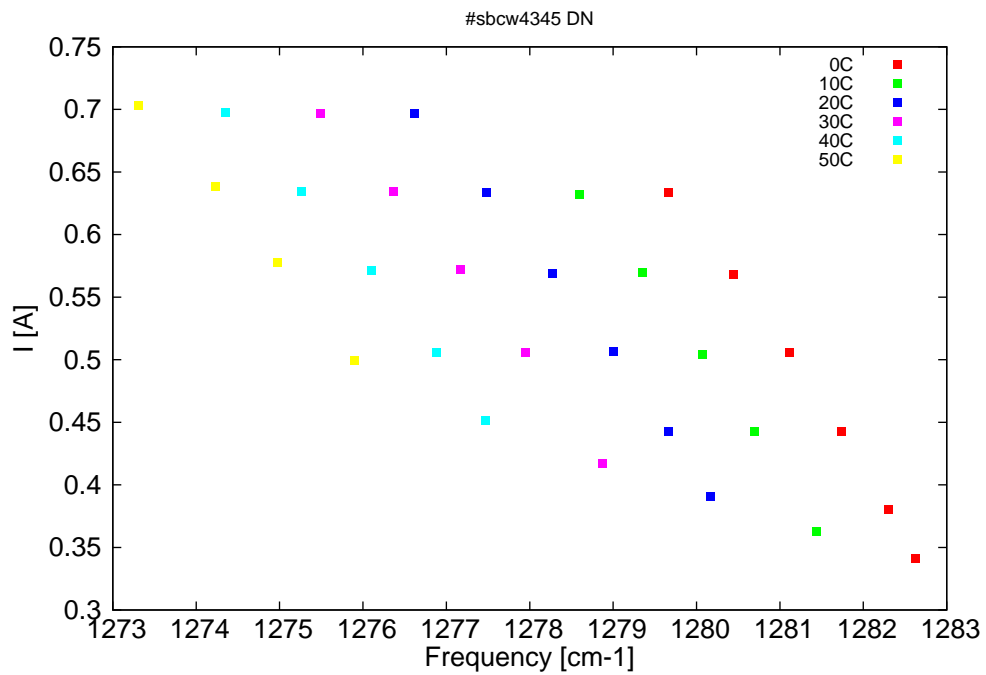


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7796.5	1282.6	0.4	0	8.13	0.341
7798.5	1282.3	10.2	0	8.29	0.38
7801.9	1281.7	29.7	0	8.54	0.443
7805.7	1281.1	44.6	0	8.8	0.506
7809.8	1280.4	56.7	0	9.05	0.568
7814.6	1279.7	68.4	0	9.31	0.634
7803.7	1281.4	0.9	10	8.14	0.362
7808.2	1280.7	23	10	8.47	0.442
7812	1280.1	40.5	10	8.72	0.505
7816.5	1279.3	54.7	10	8.98	0.57
7821.1	1278.6	67.8	10	9.23	0.632
7811.5	1280.2	1	20	8.19	0.391
7814.5	1279.7	13.9	20	8.39	0.443
7818.6	1279	31.7	20	8.66	0.507
7823.1	1278.3	45.7	20	8.91	0.569
7827.9	1277.5	59.3	20	9.16	0.633
7833.2	1276.6	74	20	9.41	0.697
7819.4	1278.9	0.8	30	8.23	0.417
7825	1277.9	22.5	30	8.59	0.506
7829.8	1277.2	37.2	30	8.85	0.572
7834.7	1276.4	50.3	30	9.1	0.634
7840.1	1275.5	62.1	30	9.35	0.697
7828	1277.5	0.9	40	8.31	0.452
7831.6	1276.9	13.1	40	8.52	0.506
7836.4	1276.1	27.1	40	8.79	0.571
7841.5	1275.3	38.9	40	9.04	0.634
7847.1	1274.3	50.7	40	9.3	0.698
7837.6	1275.9	2.2	50	8.46	0.5
7843.3	1275	17.6	50	8.77	0.577
7847.8	1274.2	28.2	50	9.02	0.638
7853.6	1273.3	39.1	50	9.28	0.703

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

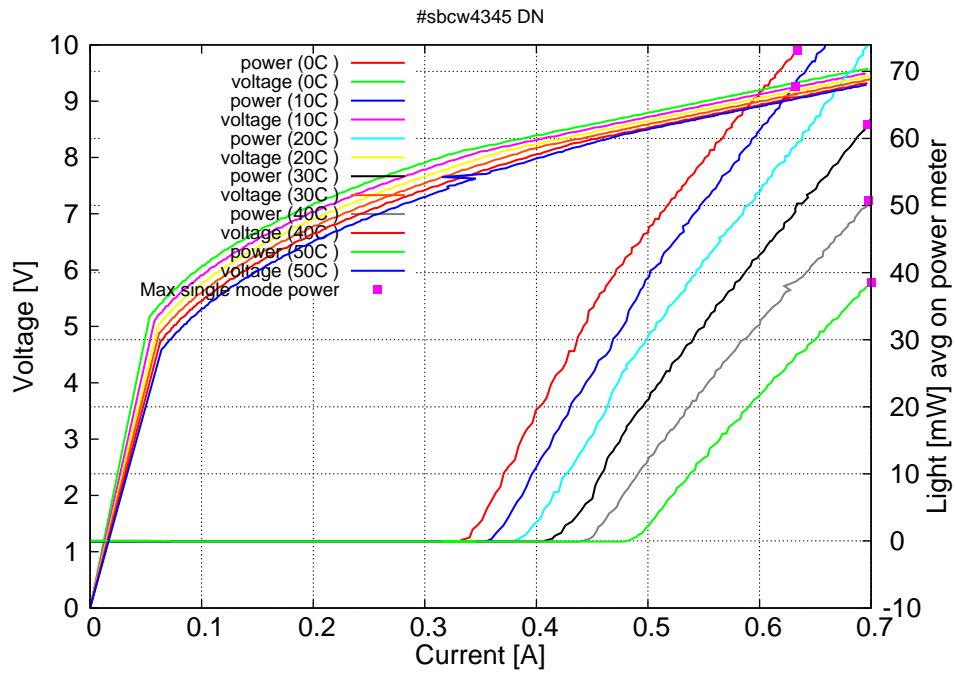


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.34A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.64A between 0C and 10C, 0.70A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

