

Datasheet for #sbcw7274 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.

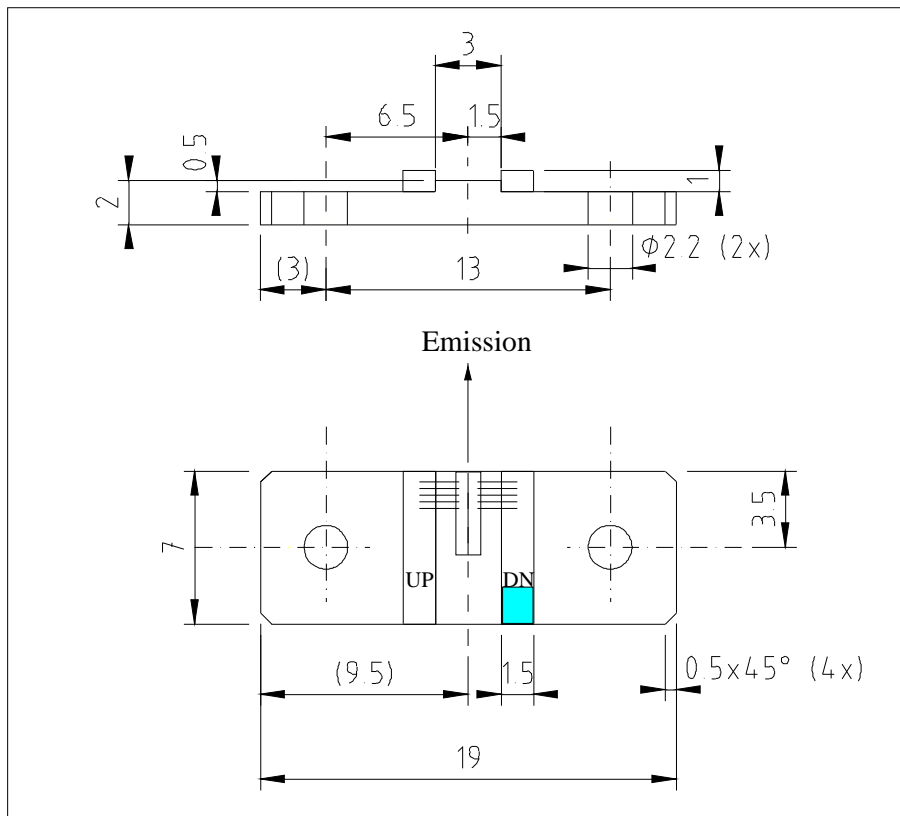


Figure 1: Mechanical and electrical interface for #sbcw7274 DN (please note that the laser is connected to the DN pad drawn in blue)

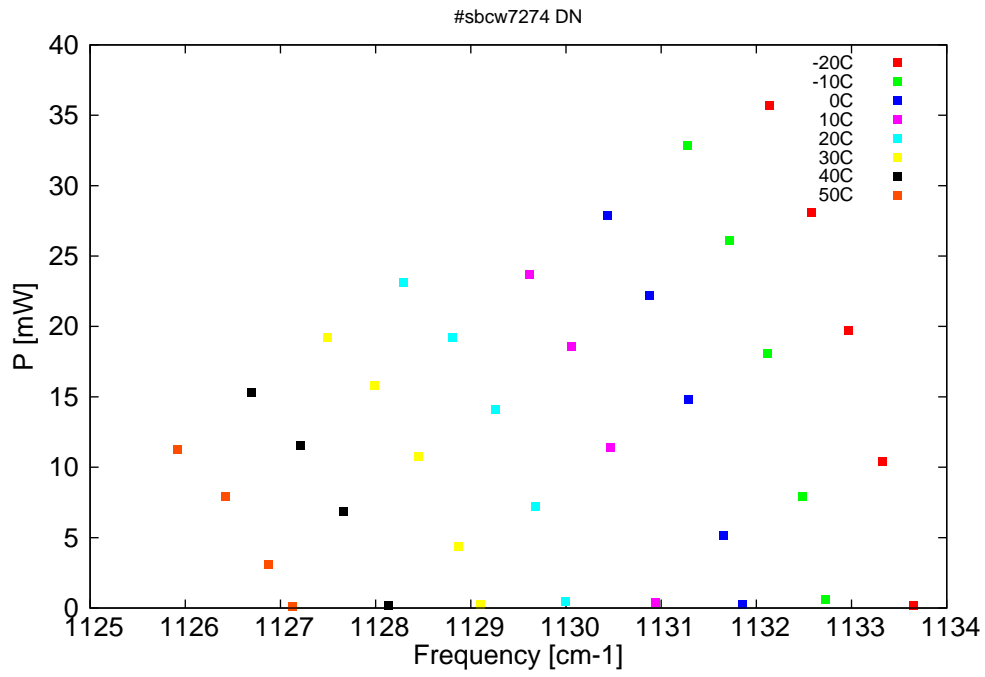


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

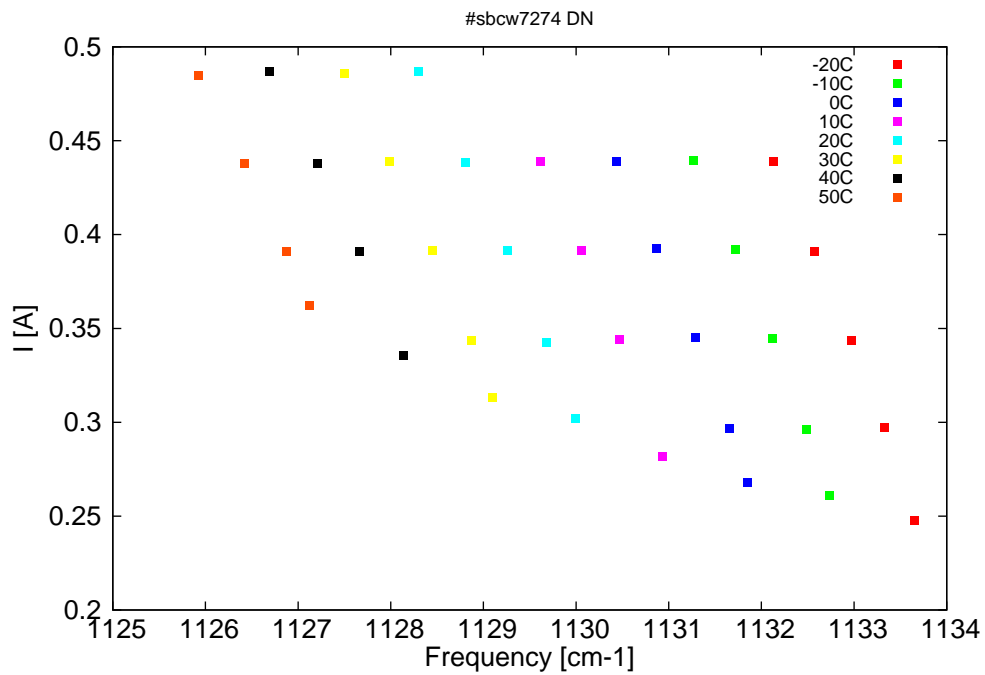


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8821	1133.7	0.2	-20	8.61	0.248
8823.6	1133.3	10.4	-20	9.05	0.297
8826.4	1133	19.7	-20	9.47	0.344
8829.4	1132.6	28.1	-20	9.89	0.391
8832.9	1132.1	35.7	-20	10.31	0.439
8828.2	1132.7	0.6	-10	8.59	0.261
8830.1	1132.5	7.9	-10	8.9	0.296
8833	1132.1	18.1	-10	9.33	0.345
8836.1	1131.7	26.1	-10	9.74	0.392
8839.6	1131.3	32.8	-10	10.15	0.44
8835.1	1131.9	0.2	0	8.52	0.268
8836.6	1131.7	5.2	0	8.76	0.297
8839.5	1131.3	14.8	0	9.18	0.345
8842.7	1130.9	22.2	0	9.59	0.392
8846.1	1130.4	27.9	0	9.99	0.439
8842.2	1130.9	0.4	10	8.52	0.282
8845.9	1130.5	11.4	10	9.04	0.344
8849.1	1130.1	18.6	10	9.44	0.392
8852.6	1129.6	23.7	10	9.84	0.439
8849.6	1130	0.5	20	8.57	0.302
8852	1129.7	7.2	20	8.9	0.343
8855.4	1129.3	14.1	20	9.31	0.391
8858.9	1128.8	19.2	20	9.7	0.438
8862.9	1128.3	23.1	20	10.1	0.487
8856.6	1129.1	0.2	30	8.55	0.313
8858.4	1128.9	4.4	30	8.79	0.344
8861.7	1128.5	10.7	30	9.18	0.391
8865.3	1128	15.8	30	9.57	0.439
8869.2	1127.5	19.2	30	9.95	0.486
8864.2	1128.1	0.1	40	8.62	0.335
8867.9	1127.7	6.9	40	9.06	0.391
8871.5	1127.2	11.5	40	9.43	0.438
8875.5	1126.7	15.3	40	9.82	0.487
8872.1	1127.1	0.1	50	8.73	0.362
8874.1	1126.9	3.1	50	8.95	0.391
8877.7	1126.4	7.9	50	9.31	0.438
8881.6	1125.9	11.3	50	9.68	0.485

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

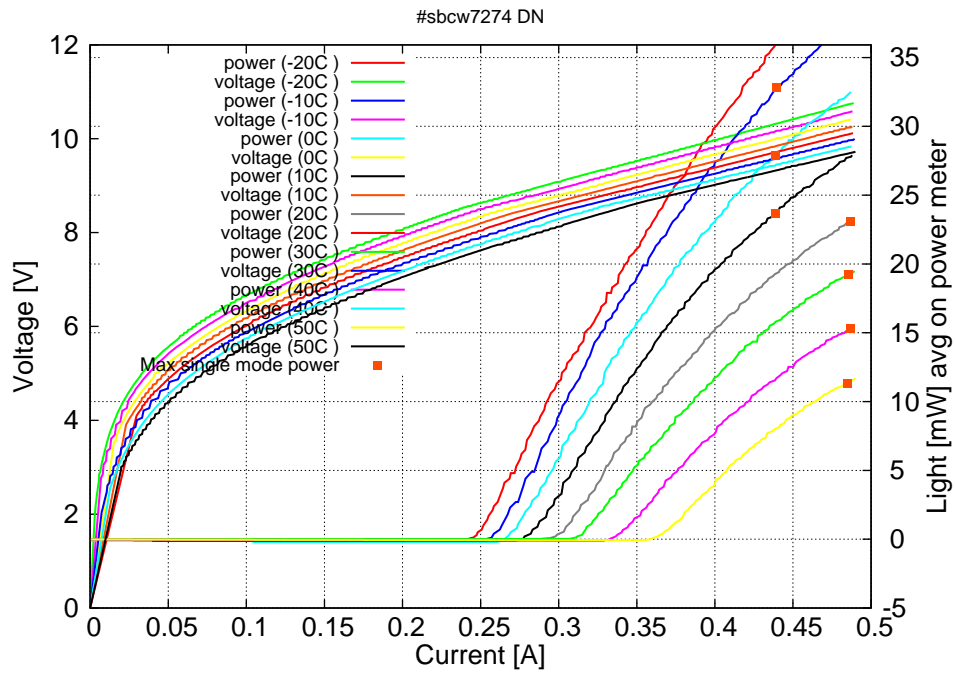


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.248A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.45A between -20C and 10C, 0.49A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

