

Datasheet for #sbcw23115 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 #sbcw23115 DN (please note that AlN submount numbering is A0WVW)

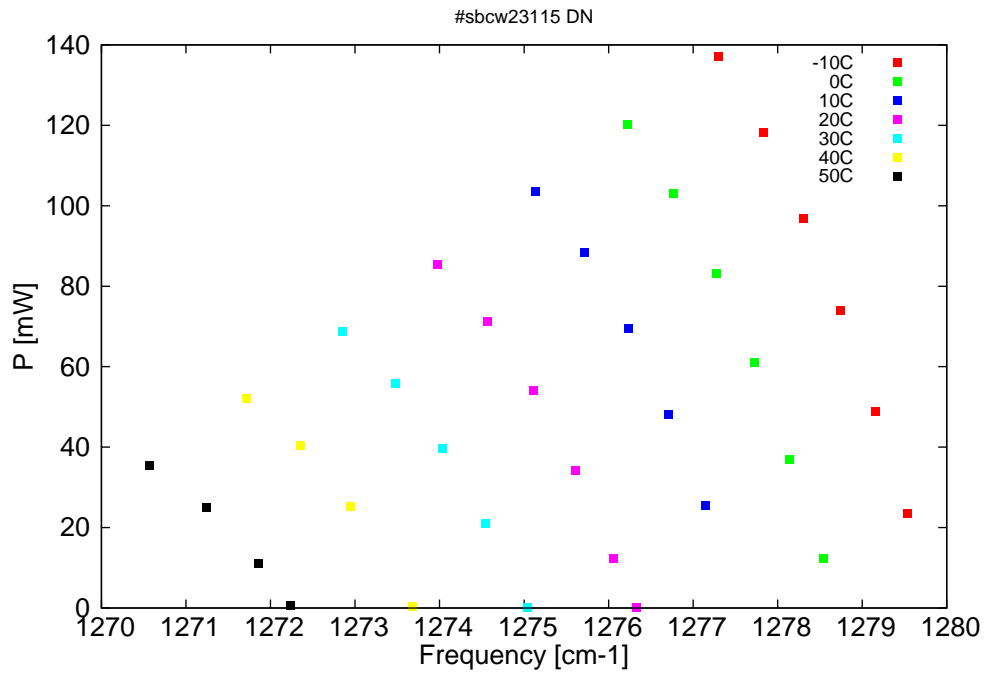


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

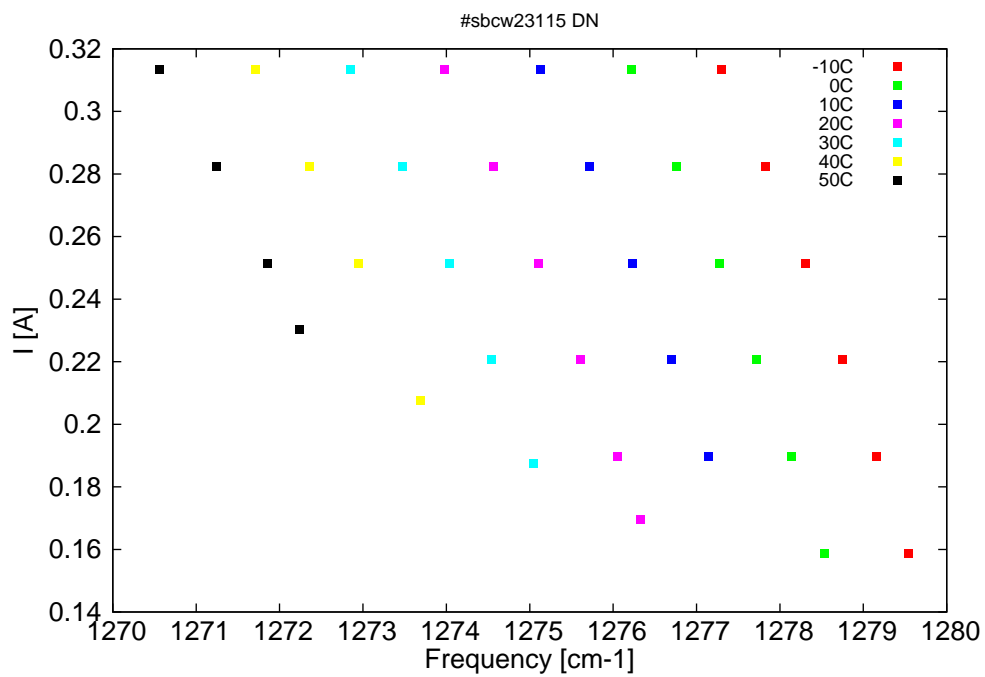


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7815.3	1279.5	23.4	-10	8.18	0.159
7817.6	1279.2	48.9	-10	8.41	0.19
7820.1	1278.7	74	-10	8.64	0.221
7822.9	1278.3	96.8	-10	8.86	0.252
7825.8	1277.8	118.2	-10	9.07	0.283
7829	1277.3	137.2	-10	9.3	0.313
7821.4	1278.5	12.4	0	8.05	0.159
7823.9	1278.1	37	0	8.29	0.19
7826.4	1277.7	61.1	0	8.51	0.221
7829.2	1277.3	83.1	0	8.74	0.252
7832.3	1276.8	102.9	0	8.95	0.283
7835.6	1276.2	120.1	0	9.18	0.313
7830	1277.1	25.5	10	8.18	0.19
7832.7	1276.7	48.1	10	8.41	0.221
7835.6	1276.2	69.4	10	8.63	0.252
7838.7	1275.7	88.4	10	8.86	0.283
7842.3	1275.1	103.6	10	9.09	0.313
7835	1276.3	0.1	20	7.92	0.17
7836.7	1276.1	12.4	20	8.08	0.19
7839.4	1275.6	34.3	20	8.31	0.221
7842.5	1275.1	54.1	20	8.53	0.252
7845.8	1274.6	71.2	20	8.76	0.283
7849.5	1274	85.3	20	9	0.313
7842.9	1275	0.2	30	7.98	0.188
7845.9	1274.5	21.1	30	8.23	0.221
7849.1	1274	39.8	30	8.45	0.252
7852.5	1273.5	55.8	30	8.69	0.283
7856.4	1272.8	68.8	30	8.92	0.313
7851.2	1273.7	0.5	40	8.06	0.208
7855.8	1272.9	25.3	40	8.38	0.252
7859.4	1272.4	40.3	40	8.61	0.283
7863.4	1271.7	52.1	40	8.86	0.313
7860.2	1272.2	0.6	50	8.16	0.23
7862.5	1271.9	11	50	8.32	0.252
7866.3	1271.2	24.9	50	8.55	0.283
7870.5	1270.6	35.3	50	8.8	0.313

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

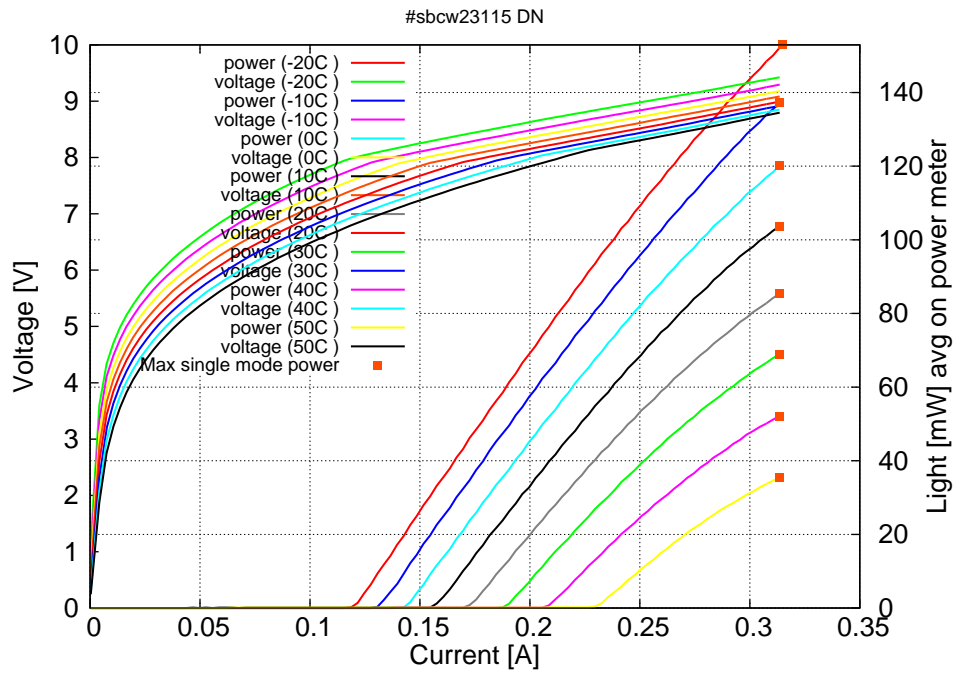


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=8.0V$ (2-wires measurements). Maximum operation current: 0.315A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

