

Datasheet for #sbcw24824 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.

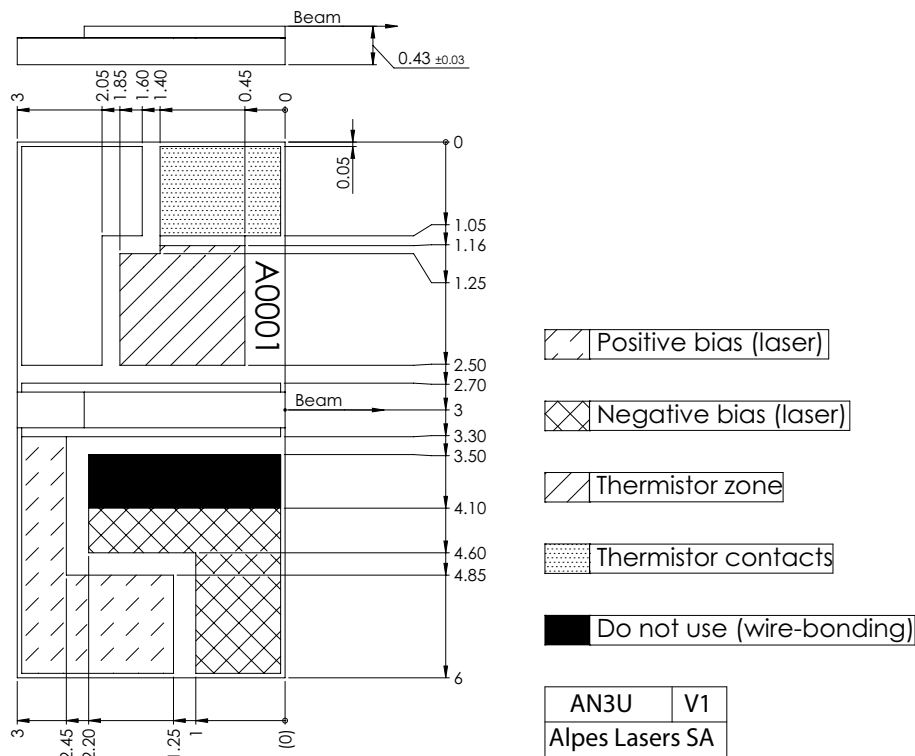


Figure 1: Mechanical and electrical interface for #sbcw24824 DN (please note that AlN submount numbering is A11XP)

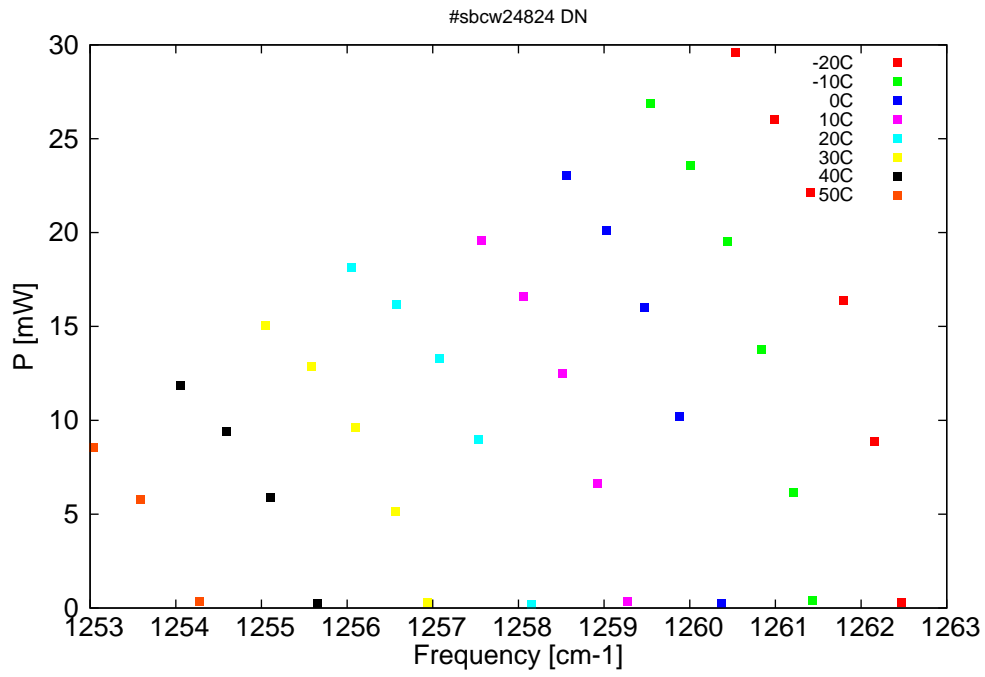


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

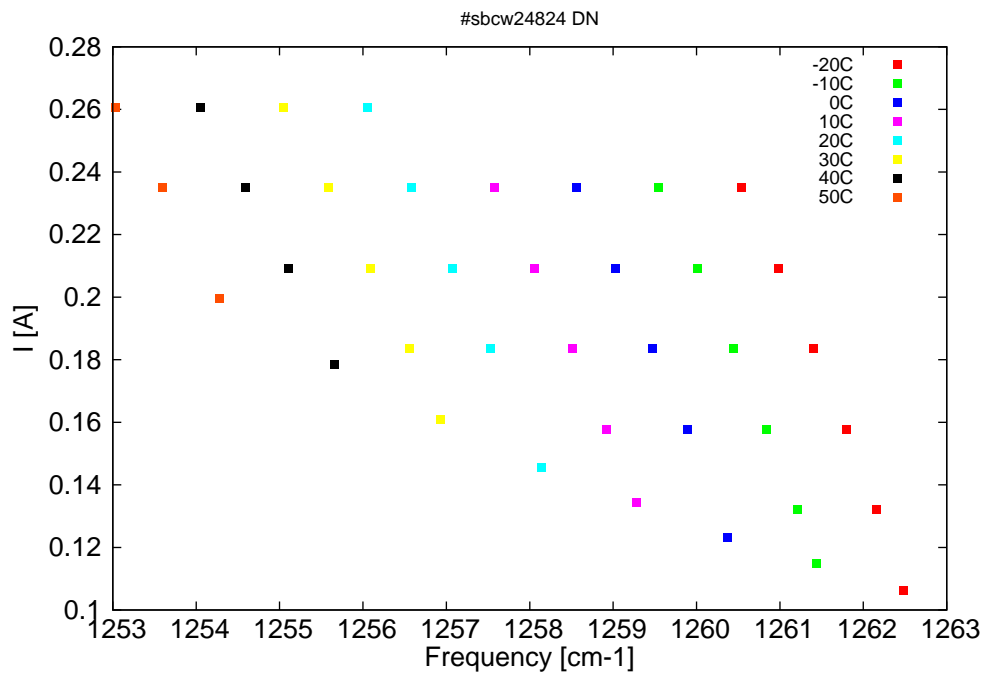


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7920.9	1262.5	0.3	-20	8.52	0.106
7923	1262.2	8.8	-20	8.88	0.132
7925.2	1261.8	16.4	-20	9.22	0.158
7927.7	1261.4	22.1	-20	9.55	0.184
7930.3	1261	26	-20	9.87	0.209
7933.1	1260.5	29.6	-20	10.18	0.235
7927.5	1261.4	0.4	-10	8.47	0.115
7928.9	1261.2	6.1	-10	8.7	0.132
7931.2	1260.8	13.8	-10	9.04	0.158
7933.7	1260.4	19.5	-10	9.36	0.184
7936.4	1260	23.6	-10	9.68	0.209
7939.4	1259.5	26.9	-10	10	0.235
7934.1	1260.4	0.3	0	8.43	0.123
7937.2	1259.9	10.2	0	8.88	0.158
7939.8	1259.5	16	0	9.2	0.184
7942.6	1259	20.1	0	9.52	0.209
7945.6	1258.6	23.1	0	9.83	0.235
7941.1	1259.3	0.4	10	8.43	0.134
7943.3	1258.9	6.6	10	8.73	0.158
7945.9	1258.5	12.5	10	9.05	0.184
7948.7	1258.1	16.6	10	9.37	0.209
7951.8	1257.6	19.6	10	9.68	0.235
7948.2	1258.1	0.2	20	8.44	0.146
7952.1	1257.5	9	20	8.9	0.184
7955	1257.1	13.3	20	9.21	0.209
7958.1	1256.6	16.2	20	9.52	0.235
7961.5	1256	18.1	20	9.82	0.261
7955.9	1256.9	0.3	30	8.51	0.161
7958.2	1256.6	5.1	30	8.79	0.184
7961.2	1256.1	9.6	30	9.09	0.209
7964.4	1255.6	12.9	30	9.4	0.235
7967.8	1255	15	30	9.69	0.261
7963.9	1255.7	0.3	40	8.58	0.178
7967.4	1255.1	5.9	40	8.94	0.209
7970.7	1254.6	9.4	40	9.24	0.235
7974.2	1254	11.8	40	9.53	0.261
7972.7	1254.3	0.3	50	8.7	0.2
7977.1	1253.6	5.8	50	9.09	0.235
7980.6	1253	8.5	50	9.38	0.261

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

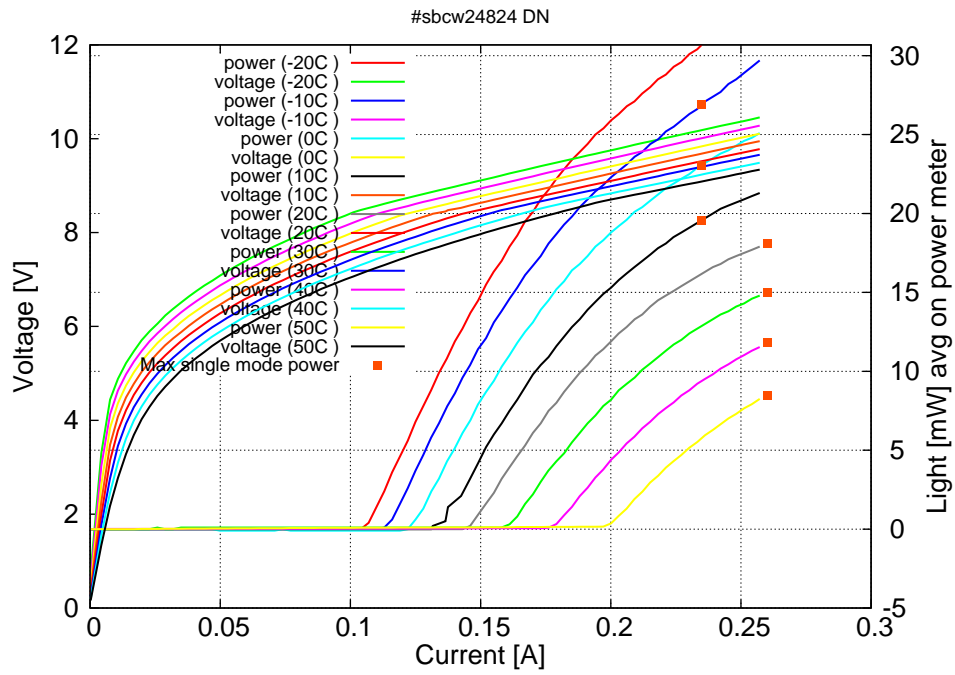


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.235A between -20C and 10C, 0.26A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

