

Datasheet for #sbcw24830 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.

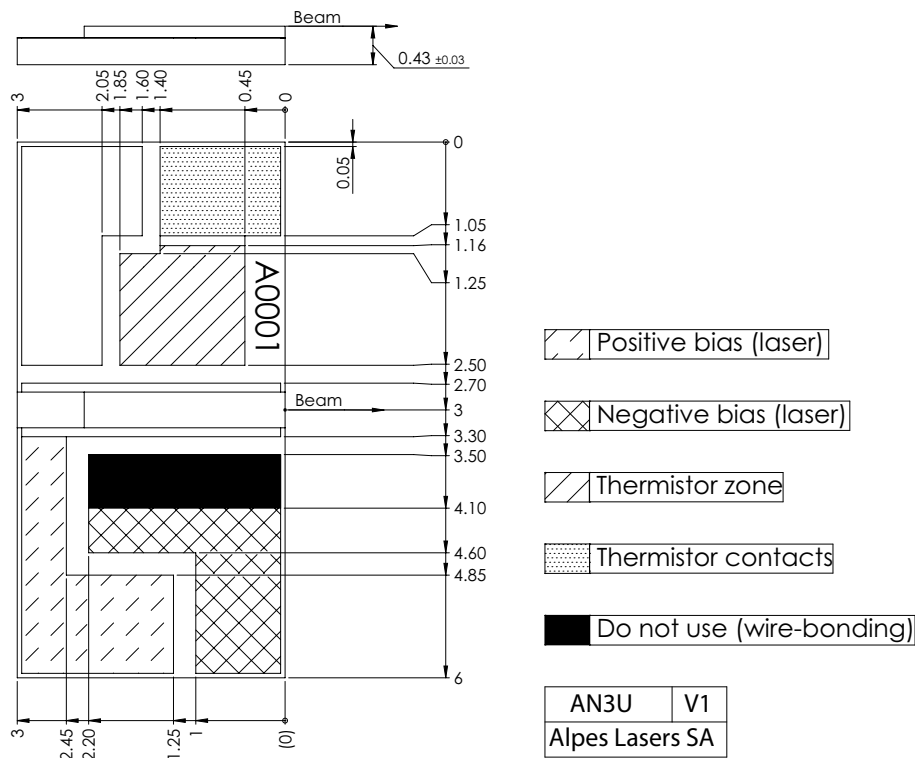


Figure 1: Mechanical and electrical interface for #sbcw24830 DN (please note that AlN submount numbering is A11WV)

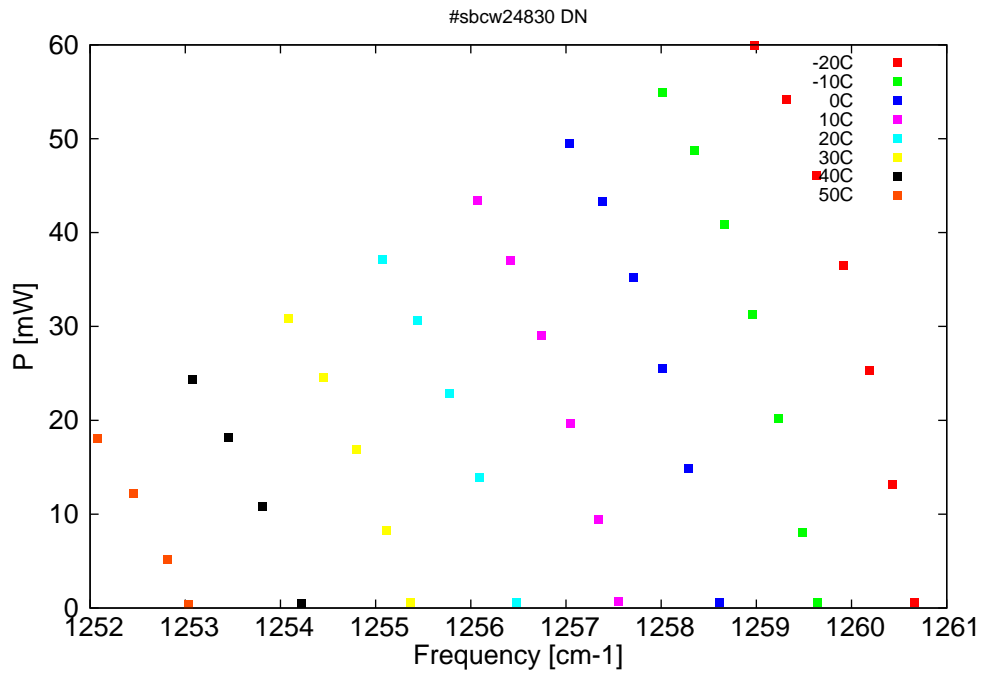


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

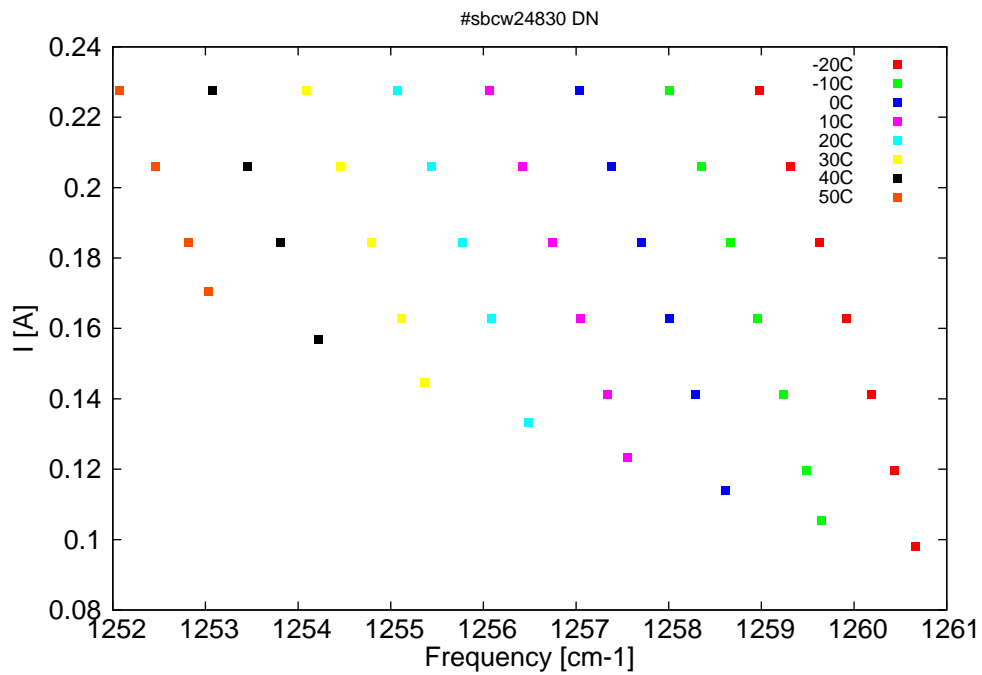


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7932.3	1260.7	0.6	-20	8.17	0.098
7933.8	1260.4	13.2	-20	8.44	0.12
7935.3	1260.2	25.3	-20	8.7	0.141
7937	1259.9	36.5	-20	8.94	0.163
7938.9	1259.6	46.1	-20	9.18	0.184
7940.8	1259.3	54.2	-20	9.42	0.206
7943	1259	59.9	-20	9.65	0.228
7938.7	1259.6	0.6	-10	8.1	0.105
7939.7	1259.5	8.1	-10	8.28	0.12
7941.3	1259.2	20.2	-10	8.53	0.141
7943	1259	31.2	-10	8.77	0.163
7944.9	1258.7	40.9	-10	9.01	0.184
7946.9	1258.4	48.8	-10	9.24	0.206
7949.1	1258	55	-10	9.48	0.228
7945.3	1258.6	0.6	0	8.06	0.114
7947.3	1258.3	14.9	0	8.38	0.141
7949.1	1258	25.6	0	8.62	0.163
7951	1257.7	35.2	0	8.85	0.184
7953	1257.4	43.3	0	9.08	0.206
7955.2	1257	49.5	0	9.31	0.228
7952	1257.6	0.7	10	8.04	0.123
7953.3	1257.3	9.4	10	8.24	0.141
7955.1	1257.1	19.7	10	8.48	0.163
7957.1	1256.7	29.1	10	8.71	0.184
7959.1	1256.4	37.1	10	8.94	0.206
7961.4	1256.1	43.4	10	9.16	0.228
7958.7	1256.5	0.6	20	8.04	0.133
7961.2	1256.1	13.9	20	8.35	0.163
7963.2	1255.8	22.8	20	8.58	0.184
7965.3	1255.4	30.7	20	8.81	0.206
7967.6	1255.1	37.1	20	9.03	0.228
7965.8	1255.4	0.6	30	8.05	0.145
7967.4	1255.1	8.2	30	8.24	0.163
7969.4	1254.8	16.9	30	8.47	0.184
7971.6	1254.5	24.6	30	8.69	0.206
7973.9	1254.1	30.8	30	8.91	0.228
7973.1	1254.2	0.5	40	8.07	0.157
7975.7	1253.8	10.9	40	8.35	0.184
7977.9	1253.5	18.2	40	8.57	0.206
7980.3	1253.1	24.3	40	8.79	0.228
7980.6	1253	0.4	50	8.09	0.17
7982	1252.8	5.1	50	8.24	0.184
7984.3	1252.5	12.2	50	8.45	0.206
7986.7	1252.1	18.1	50	8.67	0.228

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

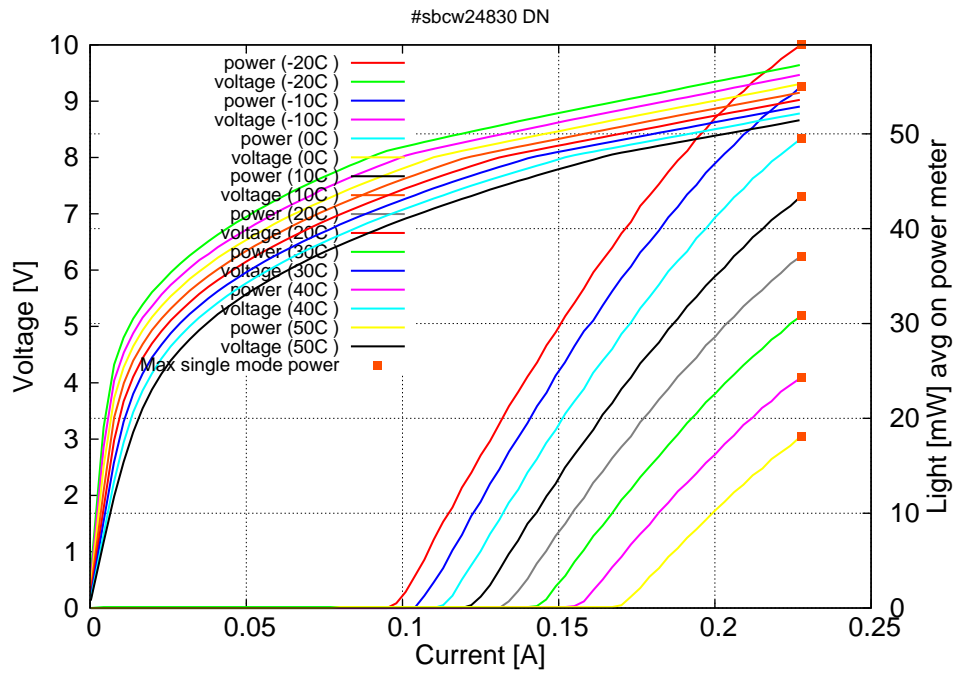


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.23A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

