

Datasheet for #sbcw24088 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 #sbcw24088 DN (please note that AlN submount numbering is A0YTE)

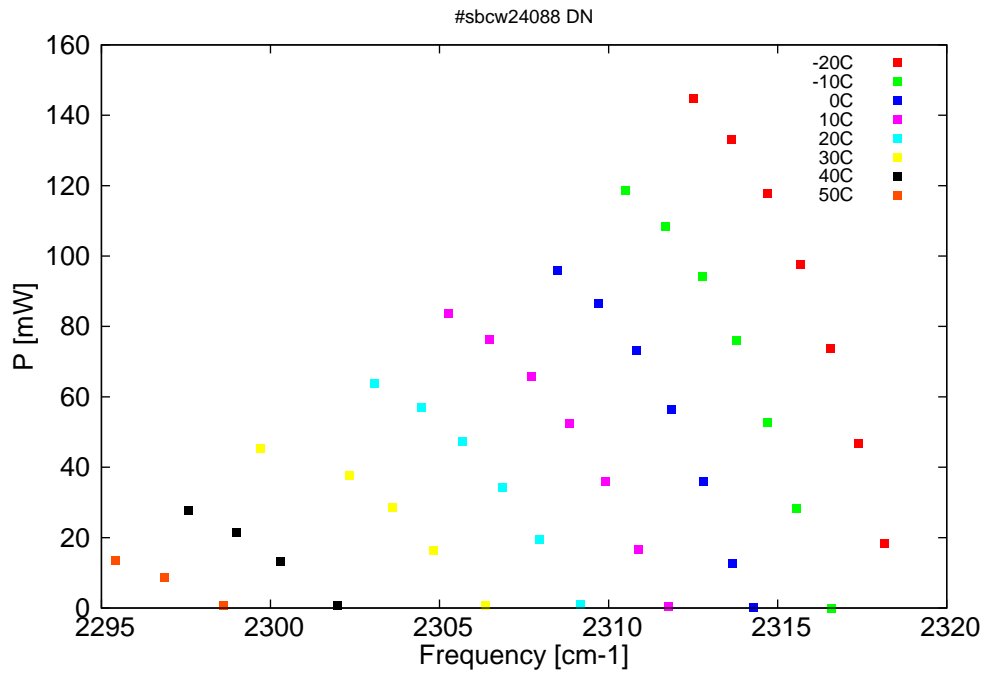


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

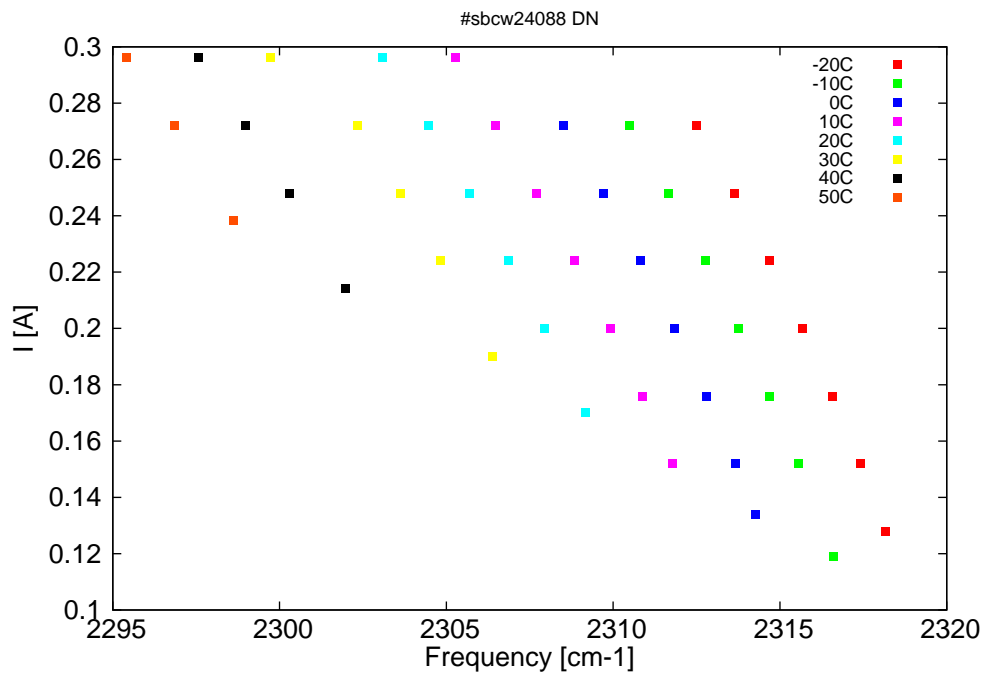


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4313.8	2318.1	18.5	-20	11.89	0.128
4315.2	2317.4	46.6	-20	12.11	0.152
4316.7	2316.6	73.8	-20	12.33	0.176
4318.4	2315.7	97.5	-20	12.54	0.2
4320.2	2314.7	117.9	-20	12.75	0.224
4322.2	2313.6	133.2	-20	12.97	0.248
4324.3	2312.5	144.9	-20	13.19	0.272
4316.7	2316.6	0	-10	11.75	0.119
4318.6	2315.6	28.4	-10	12.04	0.152
4320.2	2314.7	52.8	-10	12.26	0.176
4321.9	2313.8	75.9	-10	12.47	0.2
4323.8	2312.8	94.2	-10	12.68	0.224
4325.9	2311.7	108.3	-10	12.89	0.248
4328.1	2310.5	118.7	-10	13.11	0.272
4321	2314.3	0.1	0	11.82	0.134
4322.1	2313.7	12.7	0	11.97	0.152
4323.8	2312.8	35.9	0	12.18	0.176
4325.5	2311.8	56.5	0	12.4	0.2
4327.5	2310.8	73.2	0	12.61	0.224
4329.6	2309.7	86.6	0	12.82	0.248
4331.8	2308.5	95.8	0	13.04	0.272
4325.7	2311.8	0.4	10	11.93	0.152
4327.3	2310.9	16.8	10	12.13	0.176
4329.2	2309.9	35.9	10	12.34	0.2
4331.1	2308.9	52.4	10	12.55	0.224
4333.3	2307.7	65.9	10	12.76	0.248
4335.6	2306.5	76.3	10	12.98	0.272
4337.9	2305.3	83.6	10	13.22	0.296
4330.5	2309.2	0.9	20	12.04	0.17
4332.9	2307.9	19.3	20	12.29	0.2
4334.9	2306.9	34.4	20	12.5	0.224
4337.1	2305.7	47.2	20	12.71	0.248
4339.4	2304.4	57	20	12.93	0.272
4342	2303.1	63.9	20	13.15	0.296
4335.8	2306.4	0.7	30	12.17	0.19
4338.7	2304.8	16.3	30	12.46	0.224
4341	2303.6	28.5	30	12.67	0.248
4343.4	2302.3	37.8	30	12.89	0.272
4348.4	2299.7	45.2	30	13.1	0.296
4344.1	2302	0.8	40	12.36	0.214
4347.3	2300.3	13.3	40	12.63	0.248
4349.7	2299	21.6	40	12.84	0.272
4352.4	2297.6	27.7	40	13.06	0.296
4350.5	2298.6	0.8	50	12.53	0.239
4353.8	2296.9	8.6	50	12.79	0.272
4356.5	2295.4	13.6	50	13.01	0.296

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

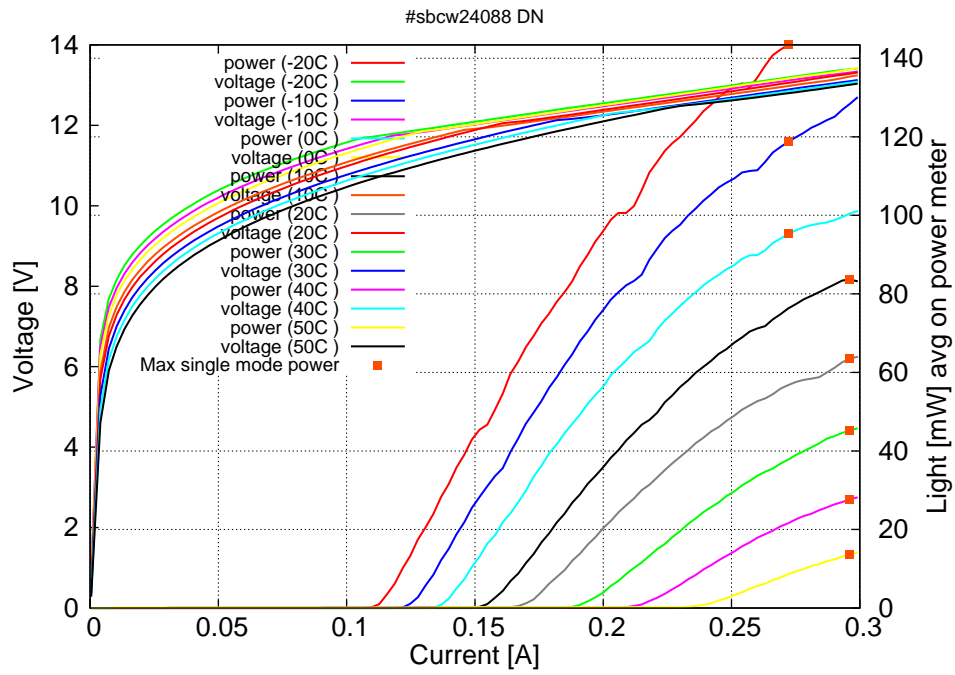


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=11.7V$ (2-wires measurements). Maximum operation current: 0.275A between -20C and 0C, 0.30A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

