

Datasheet for #sbcw24041 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 #sbcw24041 DN (please note that AlN submount numbering is A0WWZ)

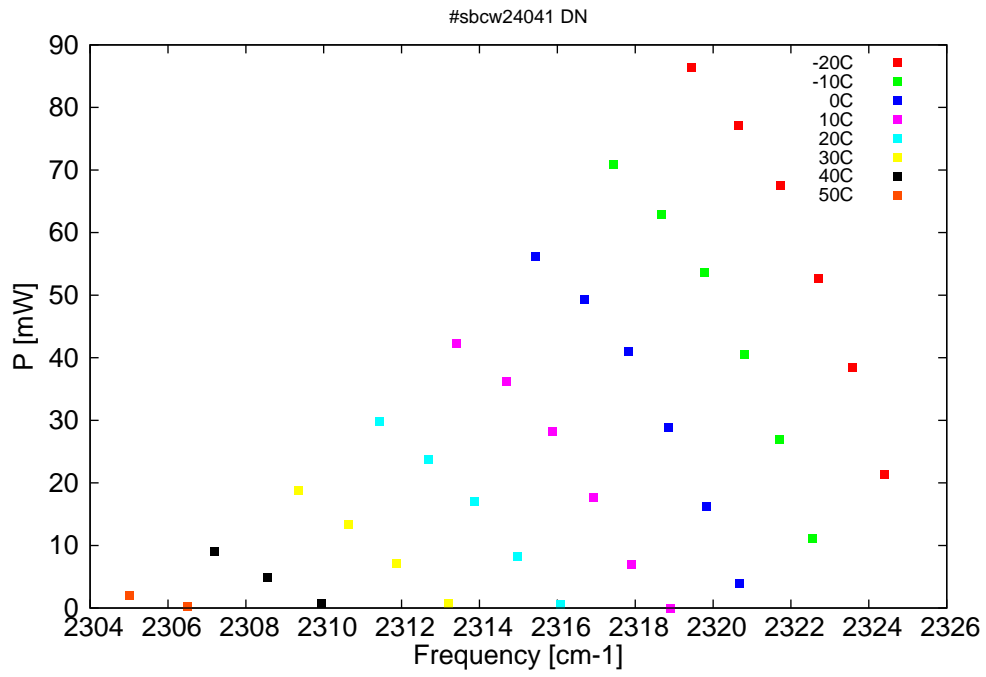


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

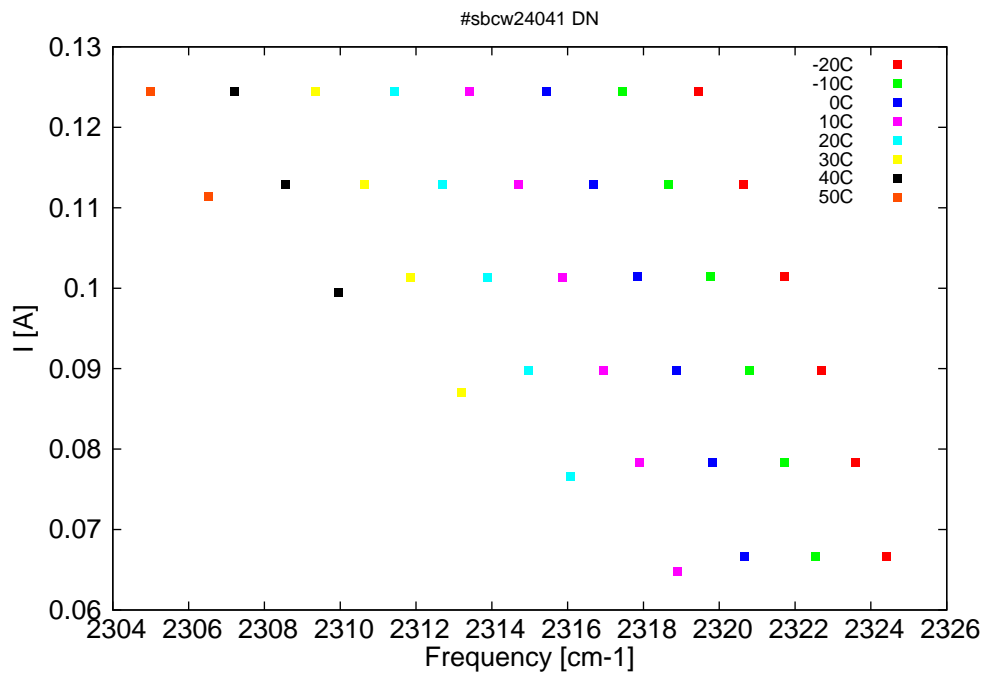


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4302.2	2324.4	21.3	-20	12.72	0.067
4303.7	2323.6	38.4	-20	13.03	0.078
4305.3	2322.7	52.6	-20	13.34	0.09
4307.1	2321.7	67.6	-20	13.66	0.101
4309.1	2320.6	77.1	-20	13.97	0.113
4311.4	2319.4	86.4	-20	14.3	0.124
4305.6	2322.5	11.2	-10	12.62	0.067
4307.2	2321.7	26.9	-10	12.93	0.078
4308.9	2320.8	40.5	-10	13.24	0.09
4310.8	2319.8	53.6	-10	13.55	0.101
4312.8	2318.7	62.9	-10	13.86	0.113
4315.1	2317.4	70.9	-10	14.19	0.124
4309.1	2320.7	3.9	0	12.54	0.067
4310.7	2319.8	16.3	0	12.83	0.078
4312.4	2318.9	28.8	0	13.14	0.09
4314.4	2317.8	41.1	0	13.44	0.101
4316.5	2316.7	49.3	0	13.76	0.113
4318.8	2315.4	56.2	0	14.07	0.124
4312.4	2318.9	0	10	12.45	0.065
4314.2	2317.9	7	10	12.75	0.078
4316	2316.9	17.7	10	13.05	0.09
4318	2315.9	28.3	10	13.34	0.101
4320.2	2314.7	36.3	10	13.65	0.113
4322.6	2313.4	42.3	10	13.95	0.124
4317.6	2316.1	0.6	20	12.65	0.077
4319.7	2315	8.3	20	12.96	0.09
4321.7	2313.9	17.1	20	13.26	0.101
4323.9	2312.7	23.7	20	13.55	0.113
4326.3	2311.4	29.8	20	13.84	0.124
4323	2313.2	0.8	30	12.85	0.087
4325.5	2311.9	7.1	30	13.18	0.101
4327.8	2310.6	13.4	30	13.46	0.113
4330.2	2309.3	18.7	30	13.74	0.124
4329.1	2310	0.7	40	13.1	0.099
4331.7	2308.6	4.9	40	13.39	0.113
4334.2	2307.2	9	40	13.67	0.124
4335.5	2306.5	0.3	50	13.36	0.111
4338.4	2305	2	50	13.64	0.124

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

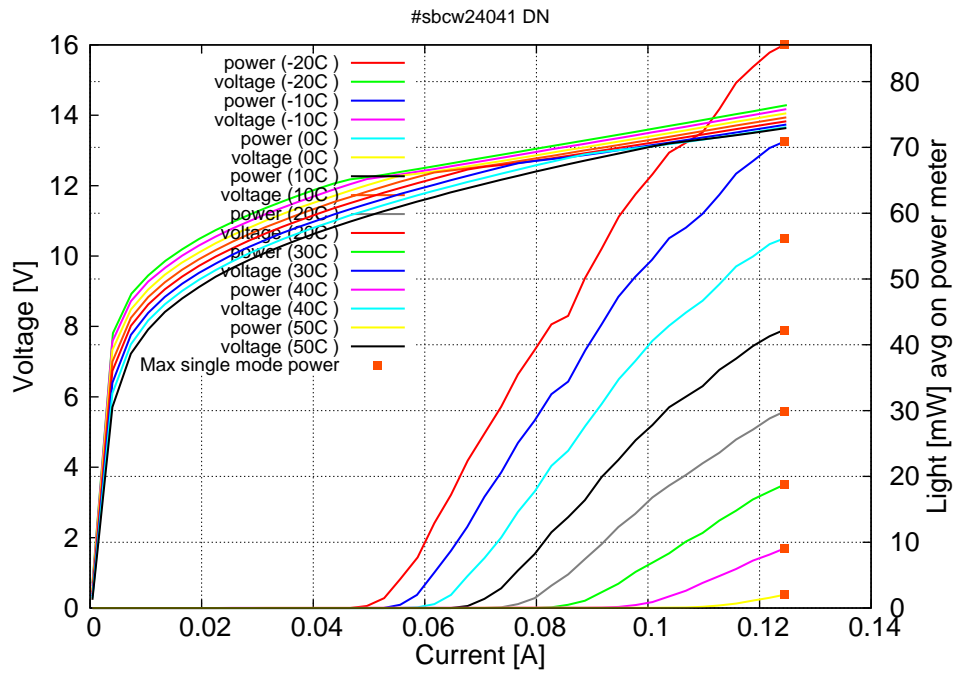


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.125A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

