

Datasheet for #sbcw24033 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 #sbcw24033 DN (please note that AlN submount numbering is A0VAD)

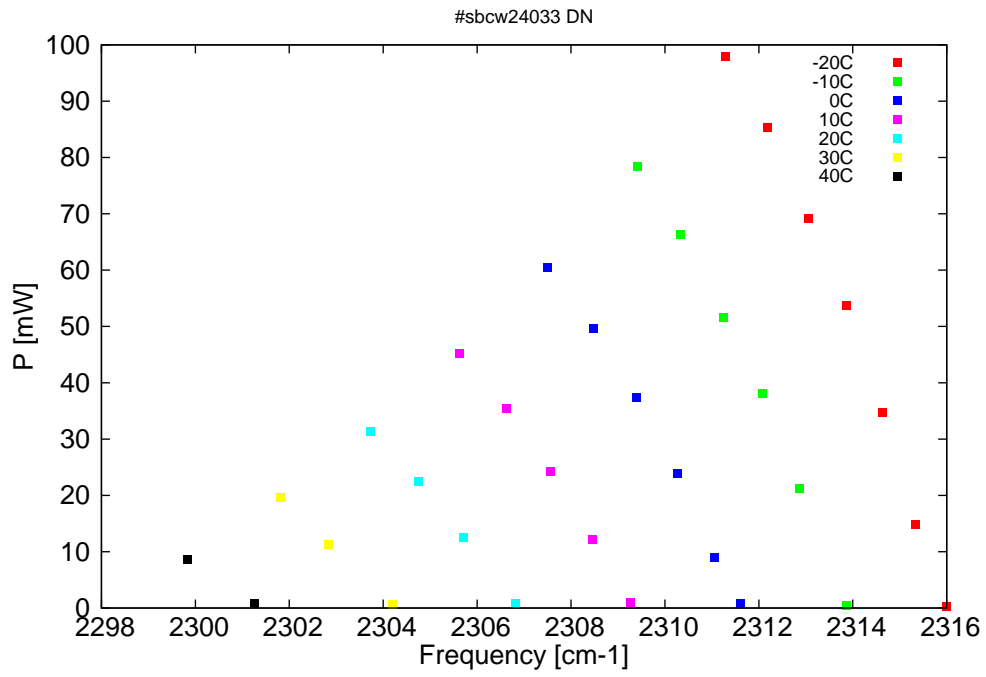


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

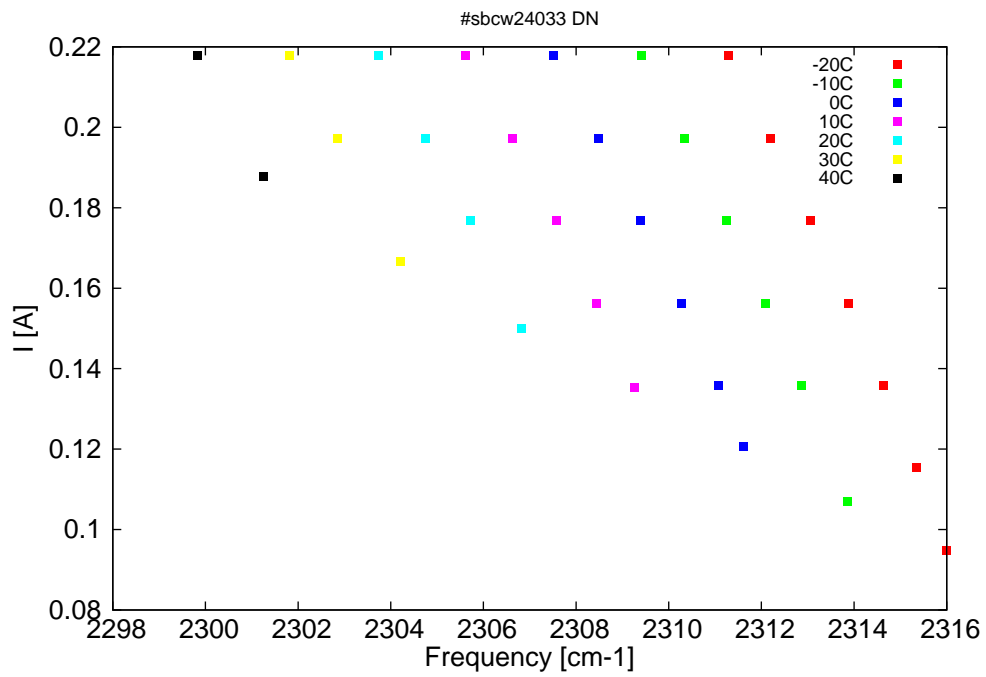


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4317.8	2316	0.3	-20	11.62	0.095
4319	2315.3	14.9	-20	11.82	0.115
4320.3	2314.6	34.8	-20	12.03	0.136
4321.8	2313.9	53.8	-20	12.24	0.156
4323.3	2313.1	69.2	-20	12.44	0.177
4324.9	2312.2	85.4	-20	12.65	0.197
4326.6	2311.3	98	-20	12.85	0.218
4321.8	2313.9	0.5	-10	11.69	0.107
4323.6	2312.9	21.2	-10	11.97	0.136
4325.1	2312.1	38.2	-10	12.17	0.156
4326.7	2311.2	51.6	-10	12.38	0.177
4328.4	2310.3	66.3	-10	12.58	0.197
4330.1	2309.4	78.4	-10	12.78	0.218
4326	2311.6	0.8	0	11.77	0.121
4327	2311.1	9	0	11.91	0.136
4328.5	2310.3	23.9	0	12.11	0.156
4330.1	2309.4	37.3	0	12.31	0.177
4331.9	2308.5	49.6	0	12.51	0.197
4333.7	2307.5	60.4	0	12.71	0.218
4330.4	2309.3	1	10	11.86	0.135
4331.9	2308.4	12.1	10	12.05	0.156
4333.6	2307.6	24.3	10	12.25	0.177
4335.3	2306.6	35.5	10	12.45	0.197
4337.2	2305.6	45.2	10	12.65	0.218
4335	2306.8	0.9	20	11.97	0.15
4337.1	2305.7	12.5	20	12.2	0.177
4338.9	2304.8	22.4	20	12.39	0.197
4340.8	2303.7	31.3	20	12.59	0.218
4339.9	2304.2	0.7	30	12.09	0.167
4342.5	2302.8	11.3	30	12.35	0.197
4344.4	2301.8	19.6	30	12.54	0.218
4345.5	2301.3	0.8	40	12.26	0.188
4348.2	2299.8	8.6	40	12.51	0.218

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

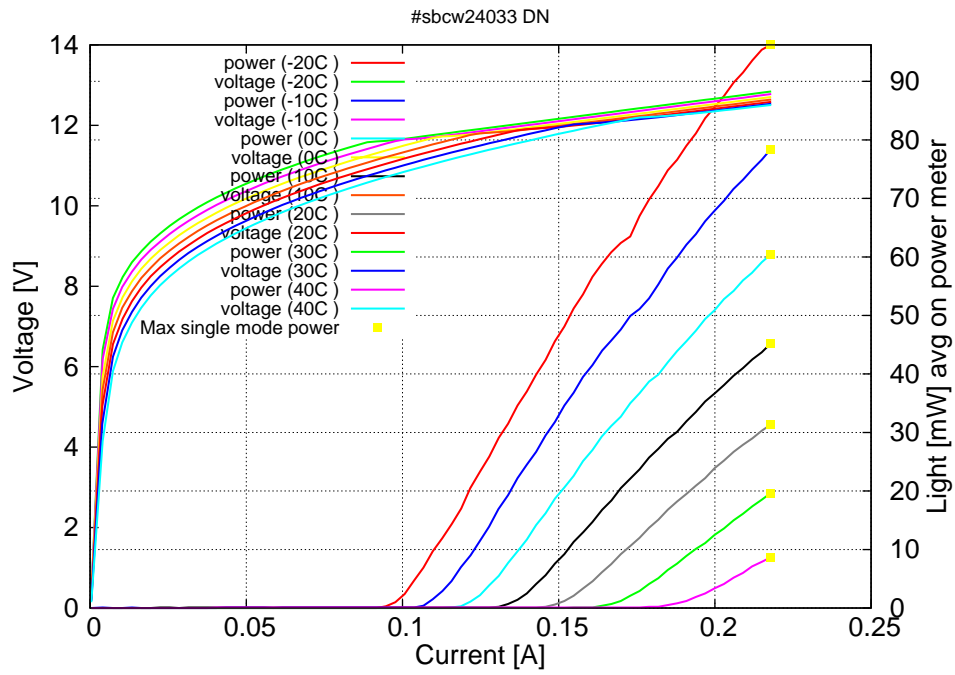


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=11.6V$ (2-wires measurements). Maximum operation current: 0.22A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

