

Datasheet for #sbcw24269 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 #sbcw24269 DN (please note that AlN submount numbering is A111C)

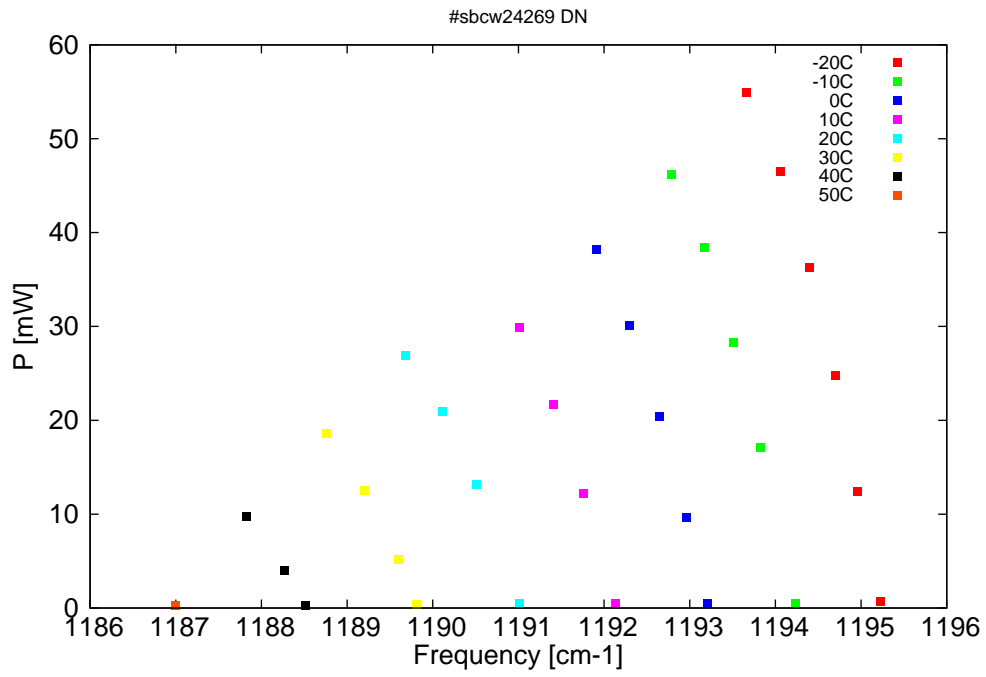


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

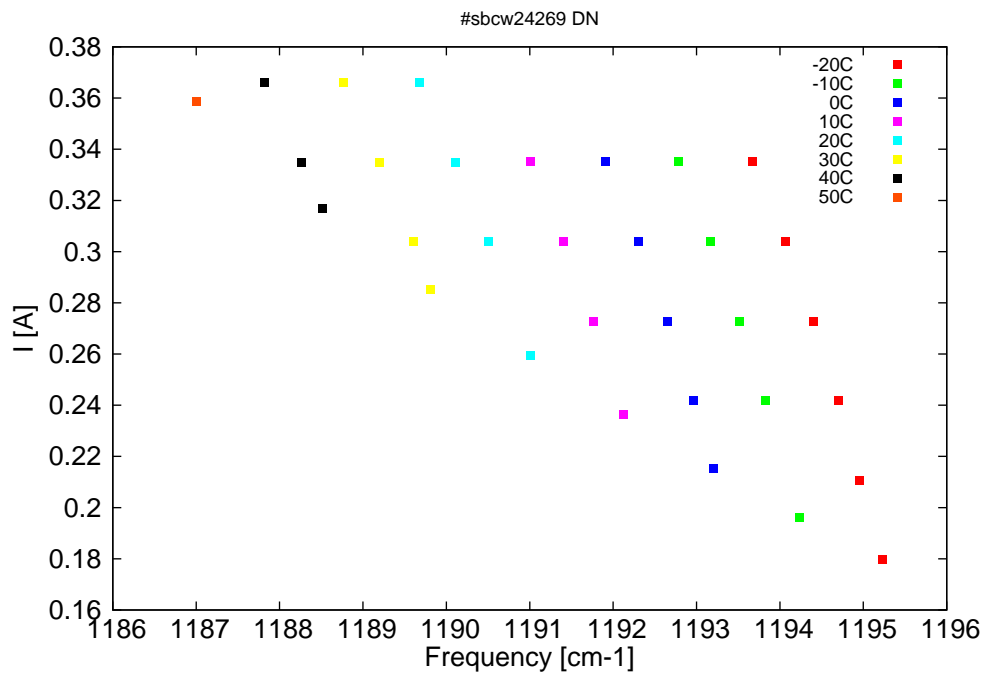


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8366.6	1195.2	0.7	-20	8.63	0.18
8368.5	1195	12.4	-20	9.03	0.211
8370.3	1194.7	24.8	-20	9.44	0.242
8372.4	1194.4	36.3	-20	9.86	0.273
8374.8	1194.1	46.6	-20	10.3	0.304
8377.5	1193.7	54.9	-20	10.74	0.335
8373.5	1194.2	0.5	-10	8.71	0.196
8376.4	1193.8	17.1	-10	9.3	0.242
8378.6	1193.5	28.3	-10	9.71	0.273
8381	1193.2	38.4	-10	10.12	0.304
8383.7	1192.8	46.2	-10	10.55	0.335
8380.8	1193.2	0.4	0	8.82	0.215
8382.5	1193	9.7	0	9.16	0.242
8384.7	1192.6	20.4	0	9.55	0.273
8387.2	1192.3	30.1	0	9.96	0.304
8389.9	1191.9	38.2	0	10.36	0.335
8388.4	1192.1	0.5	10	8.96	0.236
8390.9	1191.8	12.2	10	9.41	0.273
8393.5	1191.4	21.7	10	9.8	0.304
8396.2	1191	29.9	10	10.19	0.335
8396.2	1191	0.5	20	8.99	0.259
8399.8	1190.5	13.1	20	9.51	0.304
8402.6	1190.1	21	20	9.88	0.335
8405.6	1189.7	26.9	20	10.24	0.366
8404.7	1189.8	0.3	30	9.16	0.285
8406.2	1189.6	5.1	30	9.38	0.304
8409	1189.2	12.6	30	9.72	0.335
8412.1	1188.8	18.5	30	10.08	0.366
8413.9	1188.5	0.3	40	9.36	0.317
8415.6	1188.3	4	40	9.56	0.335
8418.8	1187.8	9.8	40	9.89	0.366
8424.6	1187	0.2	50	9.65	0.359

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

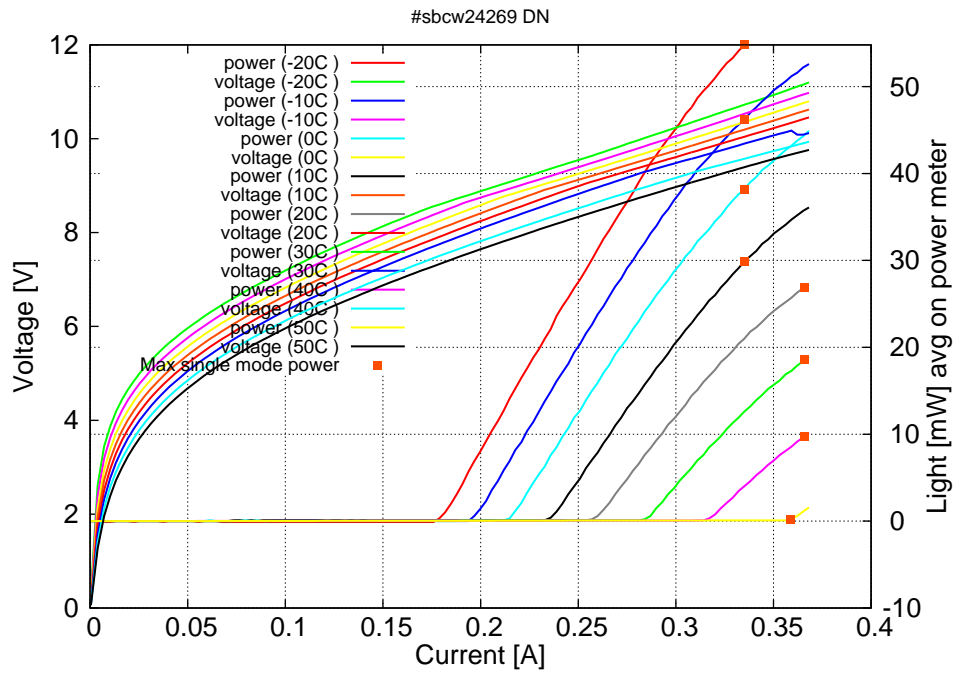


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.34A between -20C and 10C, 0.37A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

