

Datasheet for #sbcw24477 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 #sbcw24477 DN (please note that AlN submount numbering is A0ZPE)

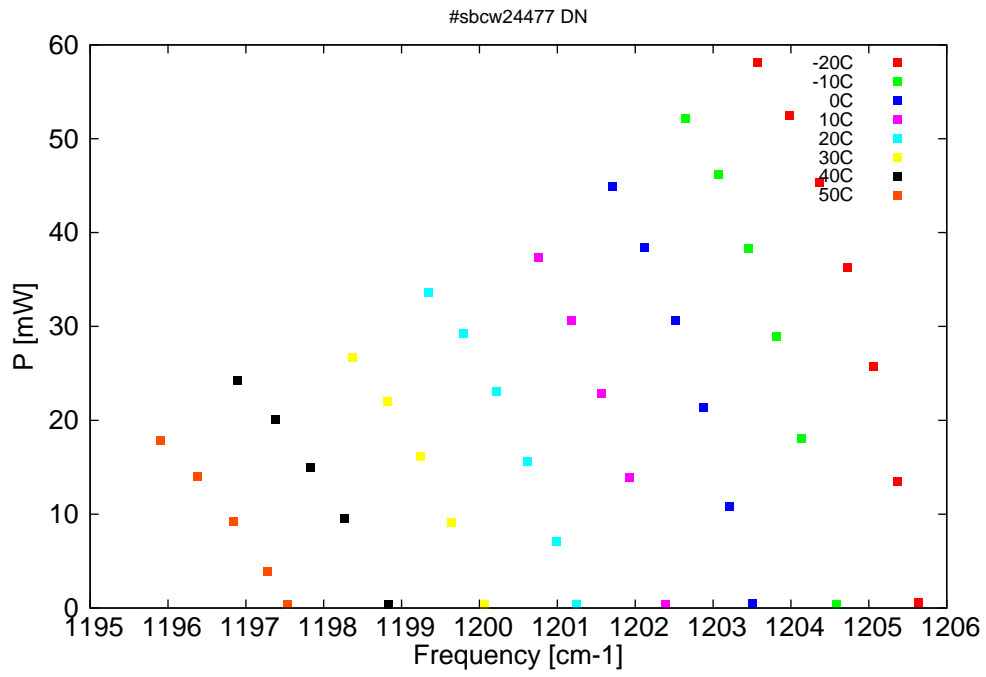


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

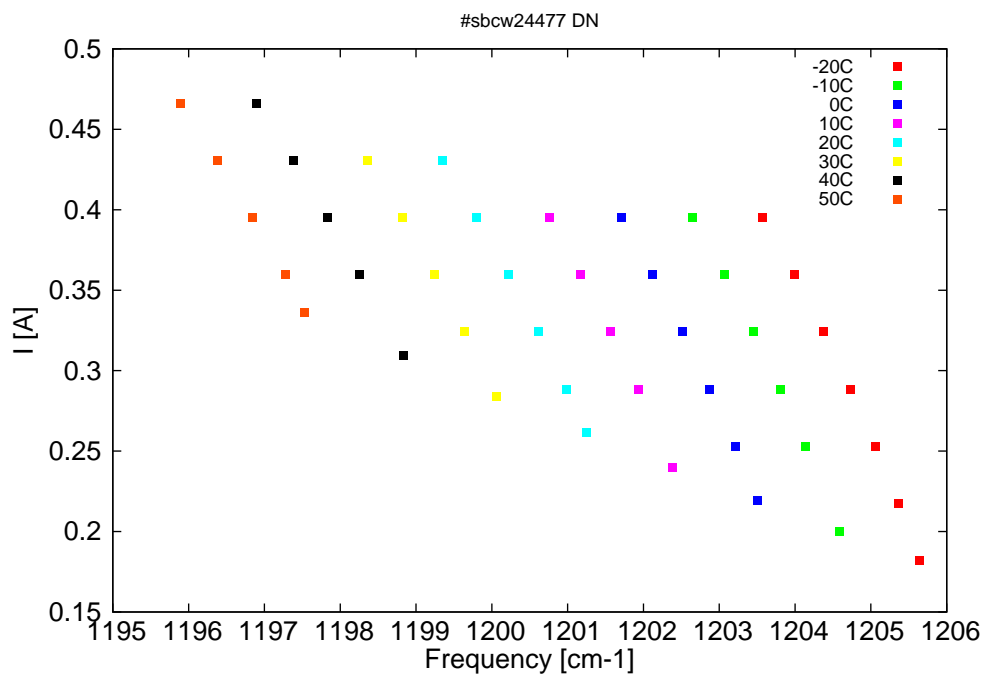


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8294.4	1205.6	0.6	-20	8.48	0.182
8296.3	1205.4	13.4	-20	8.96	0.218
8298.3	1205.1	25.7	-20	9.43	0.253
8300.6	1204.7	36.3	-20	9.9	0.289
8303.1	1204.4	45.3	-20	10.35	0.324
8305.7	1204	52.5	-20	10.8	0.36
8308.6	1203.6	58.2	-20	11.23	0.395
8301.6	1204.6	0.4	-10	8.52	0.2
8304.7	1204.1	18.1	-10	9.19	0.253
8307	1203.8	28.9	-10	9.63	0.289
8309.4	1203.5	38.4	-10	10.06	0.324
8312.1	1203.1	46.2	-10	10.47	0.36
8315	1202.6	52.2	-10	10.87	0.395
8309.1	1203.5	0.4	0	8.57	0.22
8311.1	1203.2	10.8	0	8.97	0.253
8313.4	1202.9	21.3	0	9.38	0.289
8315.9	1202.5	30.6	0	9.78	0.324
8318.6	1202.1	38.4	0	10.17	0.36
8321.4	1201.7	44.9	0	10.55	0.395
8316.8	1202.4	0.4	10	8.63	0.24
8320	1201.9	13.9	10	9.16	0.289
8322.5	1201.6	22.9	10	9.54	0.324
8325.2	1201.2	30.6	10	9.91	0.36
8328.1	1200.8	37.3	10	10.27	0.395
8324.7	1201.2	0.4	20	8.68	0.262
8326.5	1201	7.1	20	8.96	0.289
8329.1	1200.6	15.6	20	9.32	0.324
8331.8	1200.2	23	20	9.67	0.36
8334.7	1199.8	29.3	20	10.01	0.395
8337.8	1199.4	33.6	20	10.33	0.431
8332.9	1200.1	0.4	30	8.73	0.284
8335.8	1199.6	9.1	30	9.11	0.324
8338.6	1199.2	16.2	30	9.45	0.36
8341.6	1198.8	22	30	9.76	0.395
8344.7	1198.4	26.7	30	10.07	0.431
8341.4	1198.8	0.4	40	8.79	0.309
8345.4	1198.3	9.5	40	9.24	0.36
8348.4	1197.8	15	40	9.55	0.395
8351.6	1197.4	20.1	40	9.84	0.431
8355	1196.9	24.2	40	10.13	0.466
8350.5	1197.5	0.4	50	8.85	0.336
8352.2	1197.3	3.9	50	9.05	0.36
8355.3	1196.8	9.3	50	9.36	0.395
8358.5	1196.4	14	50	9.64	0.431
8361.9	1195.9	17.9	50	9.91	0.466

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

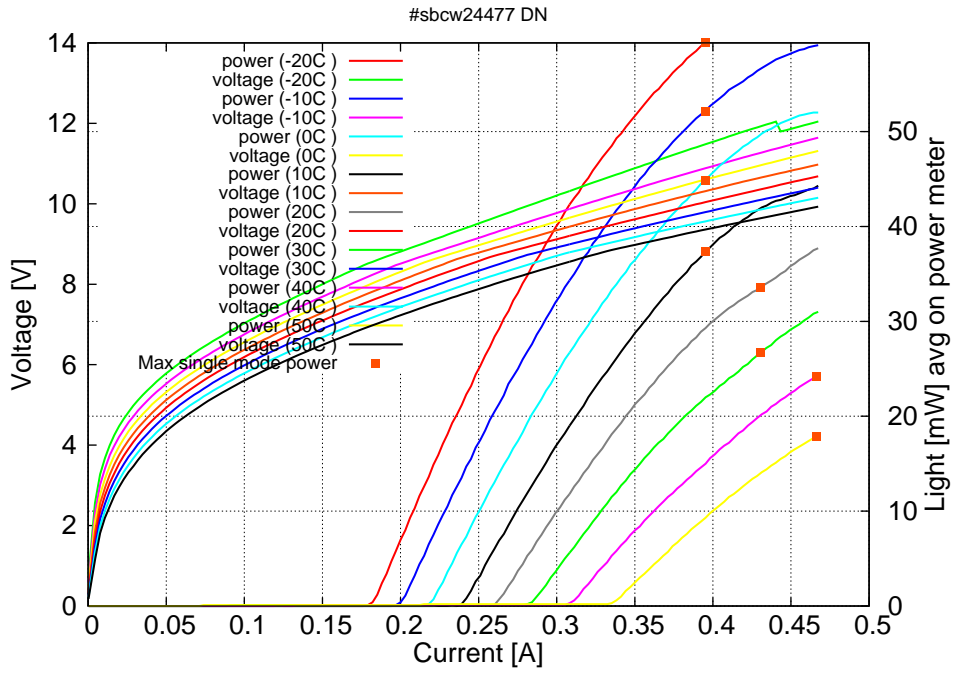


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=8.4V$ (2-wires measurements). Maximum operation current: 0.40A between -20C and 10C, 0.42A between 20C and 30C, 0.47A between 40C and 50C.

