

Datasheet for #sbcw20426 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 #sbcw20426 DN (please note that AlN submount numbering is A0P5J)

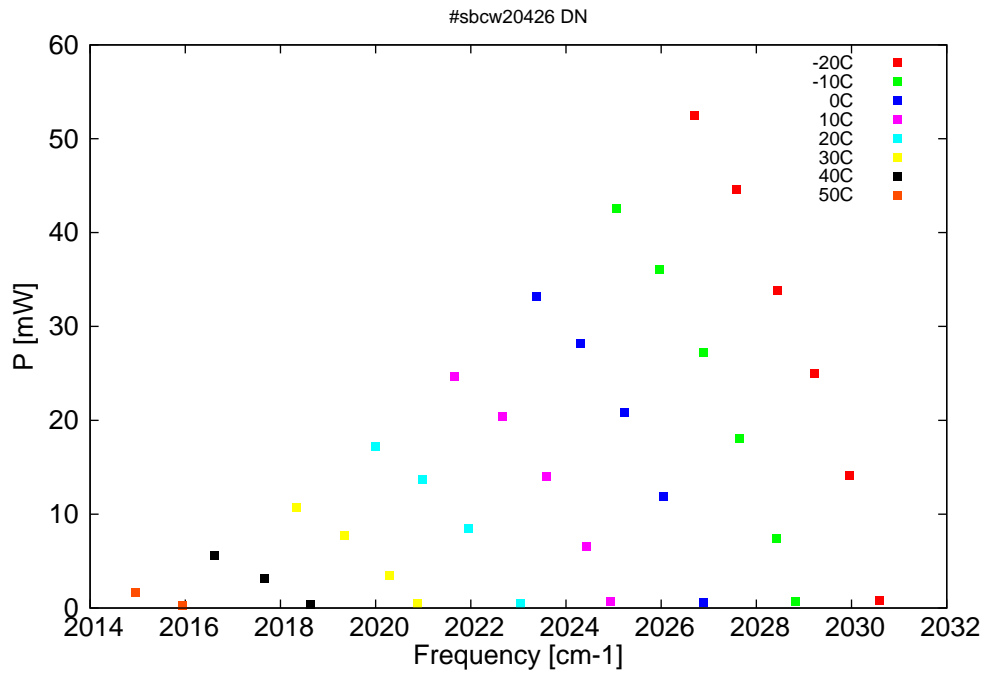


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

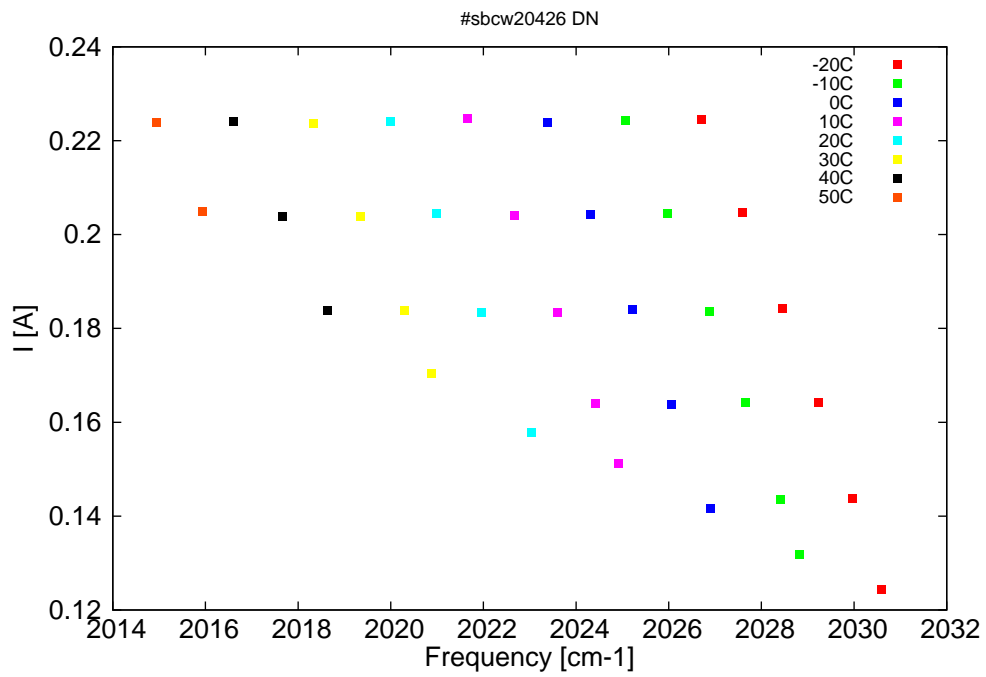


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4924.7	2030.6	0.8	-20	12.79	0.124
4926.2	2030	14.1	-20	13	0.144
4928	2029.2	25	-20	13.24	0.164
4929.9	2028.4	33.8	-20	13.47	0.184
4932	2027.6	44.6	-20	13.7	0.205
4934.1	2026.7	52.5	-20	13.93	0.224
4929	2028.8	0.7	-10	12.76	0.132
4930	2028.4	7.4	-10	12.89	0.144
4931.8	2027.7	18.1	-10	13.13	0.164
4933.7	2026.9	27.2	-10	13.35	0.184
4935.9	2026	36.1	-10	13.59	0.204
4938.1	2025.1	42.6	-10	13.81	0.224
4933.6	2026.9	0.6	0	12.77	0.142
4935.7	2026.1	11.9	0	13.02	0.164
4937.7	2025.2	20.8	0	13.24	0.184
4939.9	2024.3	28.2	0	13.48	0.204
4942.2	2023.4	33.2	0	13.7	0.224
4938.5	2024.9	0.7	10	12.77	0.151
4939.7	2024.4	6.6	10	12.91	0.164
4941.7	2023.6	14	10	13.13	0.183
4944	2022.7	20.5	10	13.36	0.204
4946.4	2021.7	24.7	10	13.6	0.225
4943	2023	0.4	20	12.74	0.158
4945.7	2022	8.4	20	13.02	0.183
4948.1	2021	13.7	20	13.26	0.204
4950.5	2020	17.2	20	13.47	0.224
4948.3	2020.9	0.5	30	12.78	0.17
4949.8	2020.3	3.5	30	12.93	0.184
4952.1	2019.3	7.7	30	13.14	0.204
4954.6	2018.3	10.7	30	13.37	0.224
4953.8	2018.6	0.3	40	12.83	0.184
4956.2	2017.7	3.1	40	13.05	0.204
4958.8	2016.6	5.6	40	13.26	0.224
4960.5	2015.9	0.2	50	12.95	0.205
4962.9	2014.9	1.6	50	13.15	0.224

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

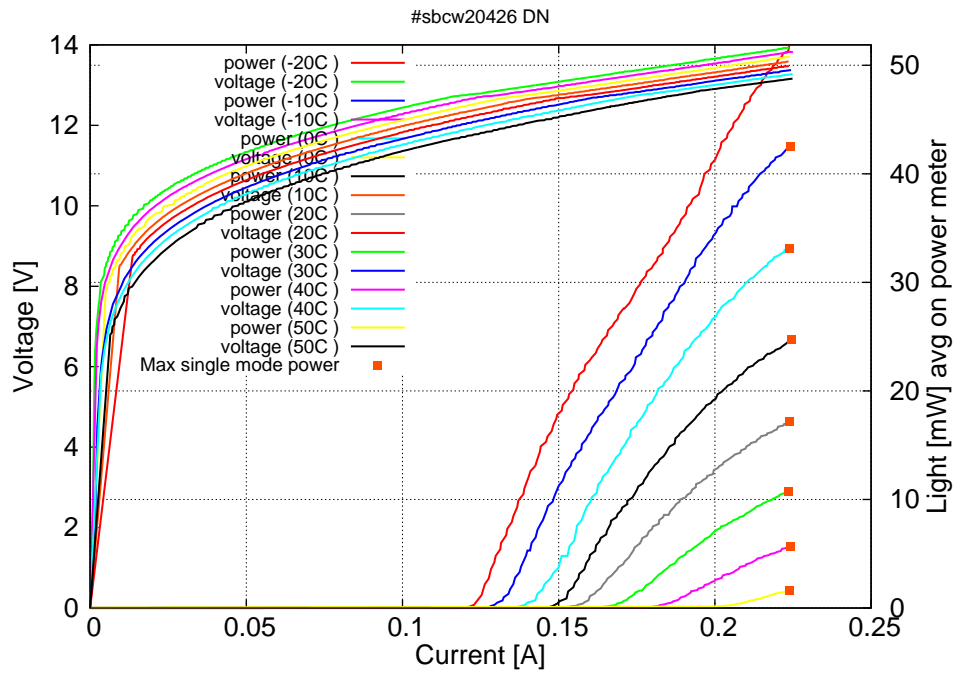


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=12.78V$ (2-wires measurements). Maximum operation current: 0.225A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

