

Datasheet for #sbcw20402 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 #sbcw20402 DN (please note that AlN submount numbering is A0NEW)

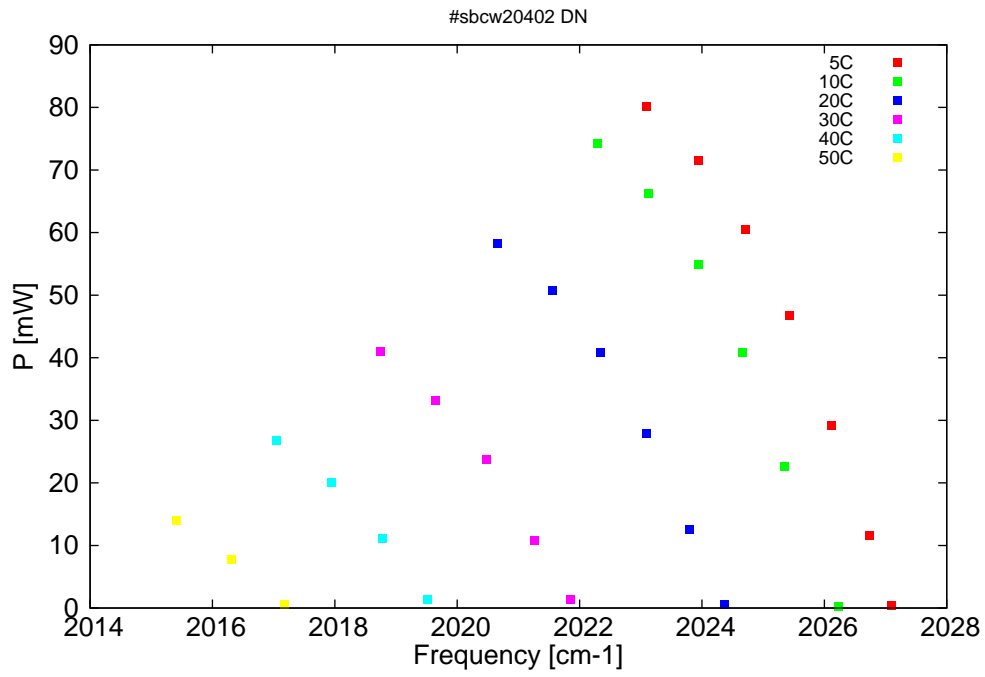


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

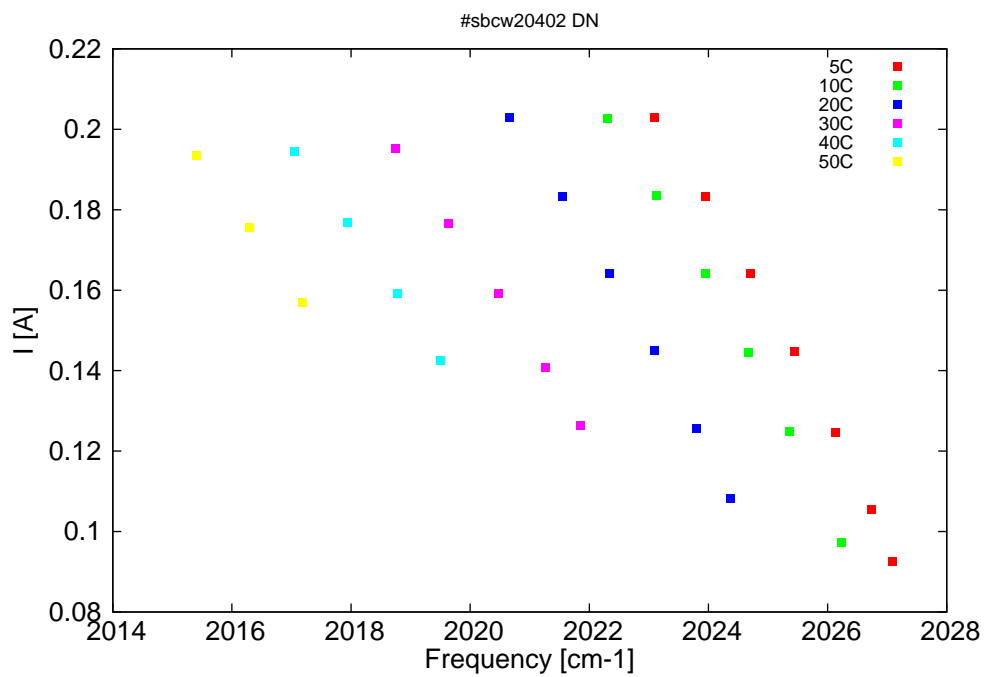


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4933.2	2027.1	0.5	5	12.31	0.093
4934	2026.7	11.6	5	12.48	0.106
4935.5	2026.1	29.2	5	12.76	0.125
4937.2	2025.4	46.7	5	13.02	0.145
4939	2024.7	60.4	5	13.29	0.164
4940.8	2023.9	71.4	5	13.54	0.183
4942.9	2023.1	80.1	5	13.79	0.203
4935.3	2026.2	0.3	10	12.33	0.097
4937.4	2025.4	22.7	10	12.7	0.125
4939.1	2024.7	40.8	10	12.97	0.145
4940.8	2023.9	54.9	10	13.23	0.164
4942.8	2023.1	66.2	10	13.49	0.184
4944.9	2022.3	74.2	10	13.73	0.203
4939.8	2024.4	0.5	20	12.39	0.108
4941.2	2023.8	12.5	20	12.61	0.126
4942.9	2023.1	28	20	12.87	0.145
4944.8	2022.3	40.8	20	13.13	0.164
4946.7	2021.6	50.7	20	13.37	0.183
4948.9	2020.7	58.3	20	13.63	0.203
4946	2021.9	1.3	30	12.52	0.126
4947.4	2021.3	10.9	30	12.69	0.141
4949.3	2020.5	23.8	30	12.93	0.159
4951.4	2019.6	33.2	30	13.15	0.177
4953.6	2018.7	41	30	13.38	0.195
4951.7	2019.5	1.3	40	12.62	0.143
4953.5	2018.8	11	40	12.81	0.159
4955.5	2017.9	20	40	13.03	0.177
4957.7	2017.1	26.7	40	13.24	0.195
4957.4	2017.2	0.6	50	12.72	0.157
4959.6	2016.3	7.7	50	12.93	0.176
4961.8	2015.4	14	50	13.13	0.193

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

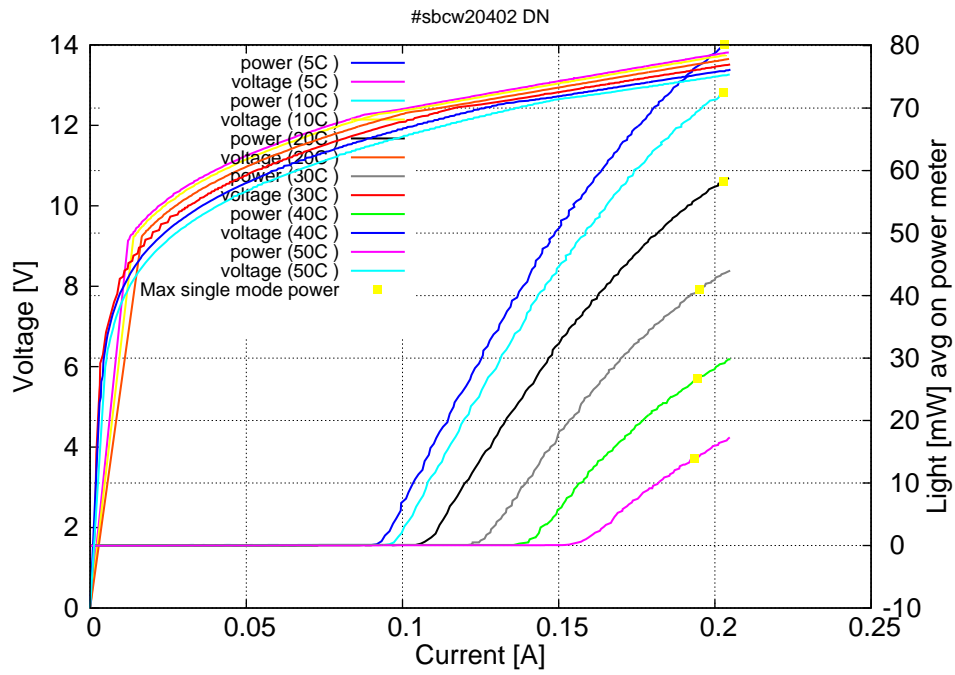


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 5C: $I_{th}=0.09A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.205A for all temperatures.

