

Datasheet for #sbcw20368 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw20368 DN

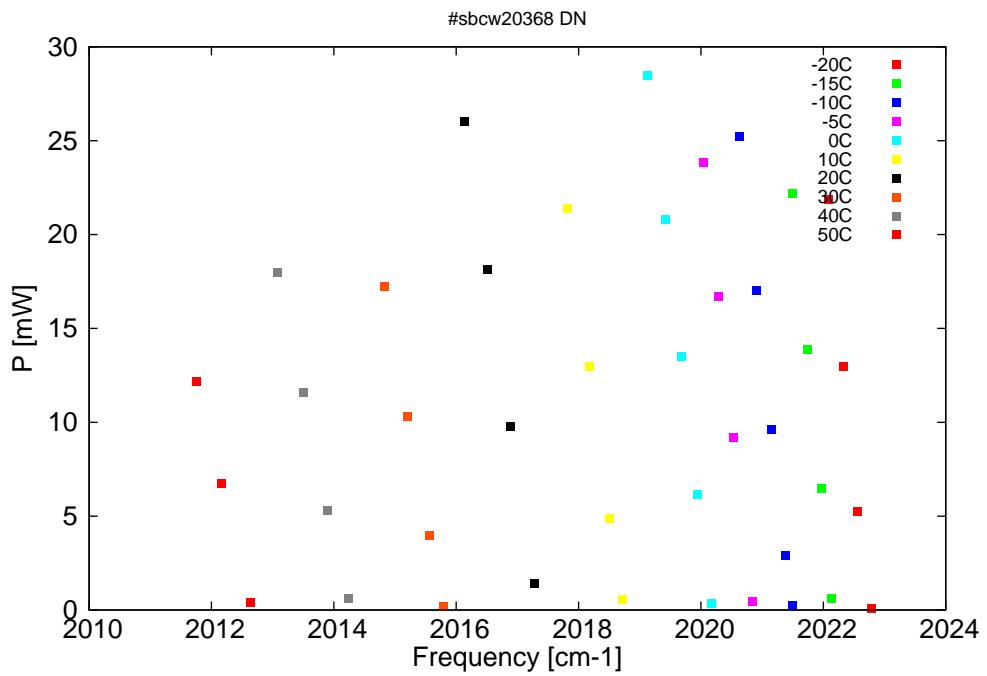


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

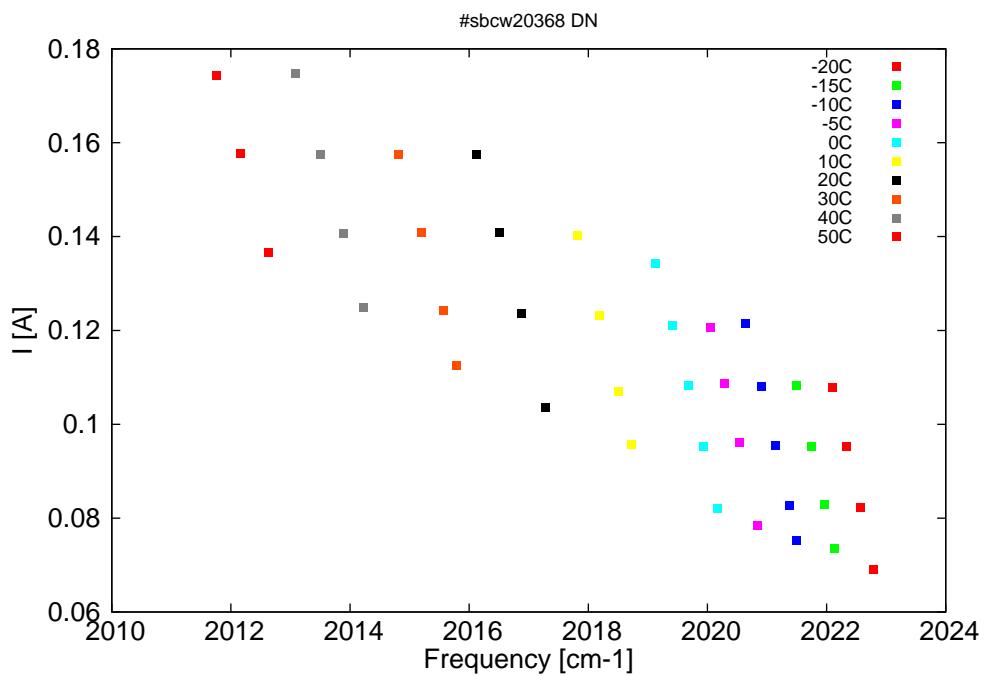


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4943.7	2022.8	0.1	-20	11.19	0.069
4944.2	2022.6	5.2	-20	11.47	0.082
4944.8	2022.3	13	-20	11.77	0.095
4945.4	2022.1	21.8	-20	12.06	0.108
4945.3	2022.1	0.6	-15	11.2	0.073
4945.7	2022	6.5	-15	11.41	0.083
4946.2	2021.7	13.9	-15	11.69	0.095
4946.8	2021.5	22.2	-15	11.98	0.108
4946.8	2021.5	0.2	-10	11.17	0.075
4947.1	2021.4	2.9	-10	11.33	0.083
4947.7	2021.1	9.6	-10	11.61	0.095
4948.3	2020.9	17	-10	11.9	0.108
4948.9	2020.6	25.2	-10	12.18	0.121
4948.4	2020.8	0.5	-5	11.18	0.078
4949.2	2020.5	9.2	-5	11.55	0.096
4949.8	2020.3	16.7	-5	11.83	0.109
4950.4	2020	23.9	-5	12.09	0.121
4950.1	2020.2	0.3	0	11.19	0.082
4950.6	2019.9	6.1	0	11.46	0.095
4951.3	2019.7	13.5	0	11.75	0.108
4951.9	2019.4	20.8	0	12.01	0.121
4952.6	2019.1	28.5	0	12.3	0.134
4953.6	2018.7	0.5	10	11.25	0.096
4954.1	2018.5	4.9	10	11.46	0.107
4955	2018.2	13	10	11.8	0.123
4955.9	2017.8	21.4	10	12.16	0.14
4957.2	2017.3	1.4	20	11.3	0.104
4958.1	2016.9	9.8	20	11.67	0.124
4959.1	2016.5	18.1	20	12.01	0.141
4960	2016.1	26	20	12.35	0.157
4960.8	2015.8	0.2	30	11.36	0.113
4961.4	2015.6	4	30	11.55	0.124
4962.3	2015.2	10.3	30	11.86	0.141
4963.2	2014.8	17.2	30	12.18	0.157
4964.7	2014.2	0.6	40	11.46	0.125
4965.5	2013.9	5.3	40	11.73	0.141
4966.5	2013.5	11.6	40	12.03	0.158
4967.5	2013.1	18	40	12.35	0.175
4968.6	2012.6	0.4	50	11.57	0.137
4969.8	2012.2	6.7	50	11.91	0.158
4970.8	2011.8	12.2	50	12.2	0.174

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

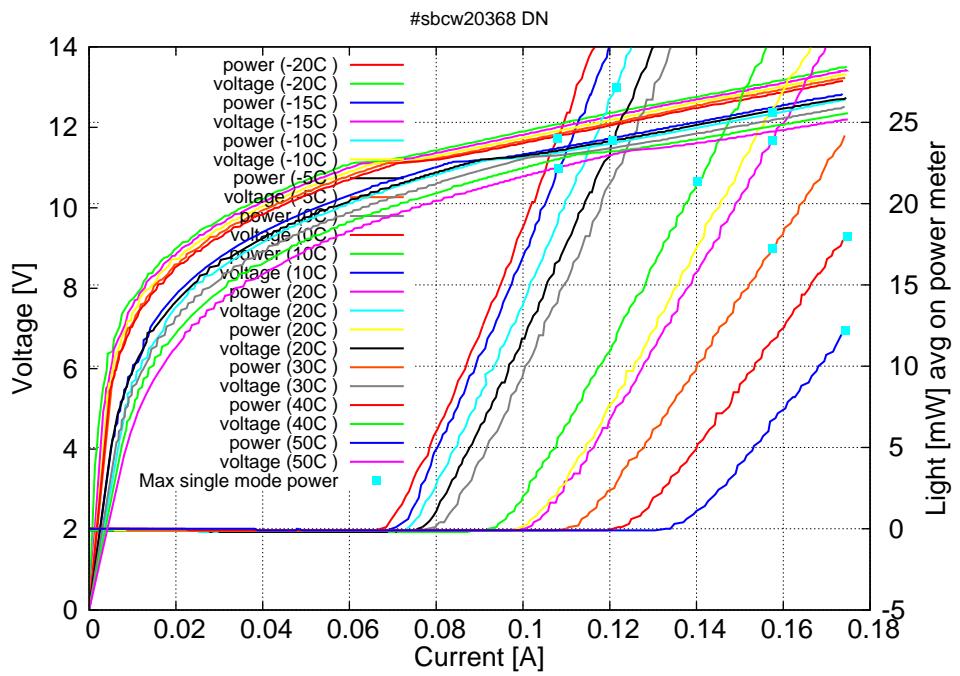


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=11.2V$ (2-wires measurements). Maximum operation current: 0.11A between -20C and -15C, 0.12A between -10C and -5C, 0.14A between 0C and 10C, 0.16A between 20C and 30C, 0.175A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

