

Datasheet for #sbcw22834 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.

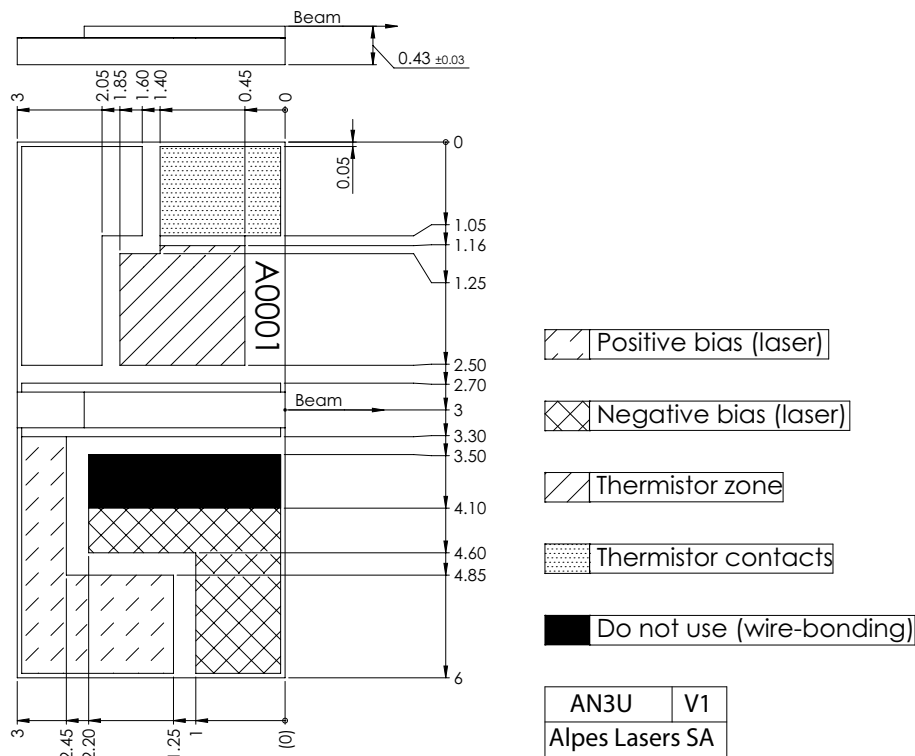


Figure 1: Mechanical and electrical interface for #sbcw22834 DN (please note that AlN submount numbering is A0WYF)

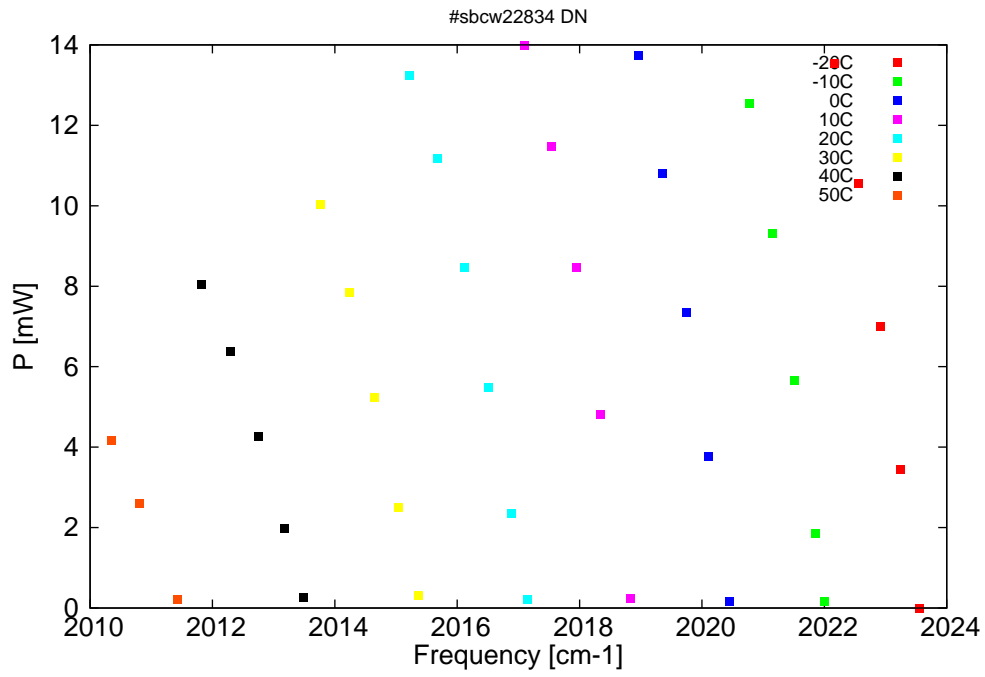


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

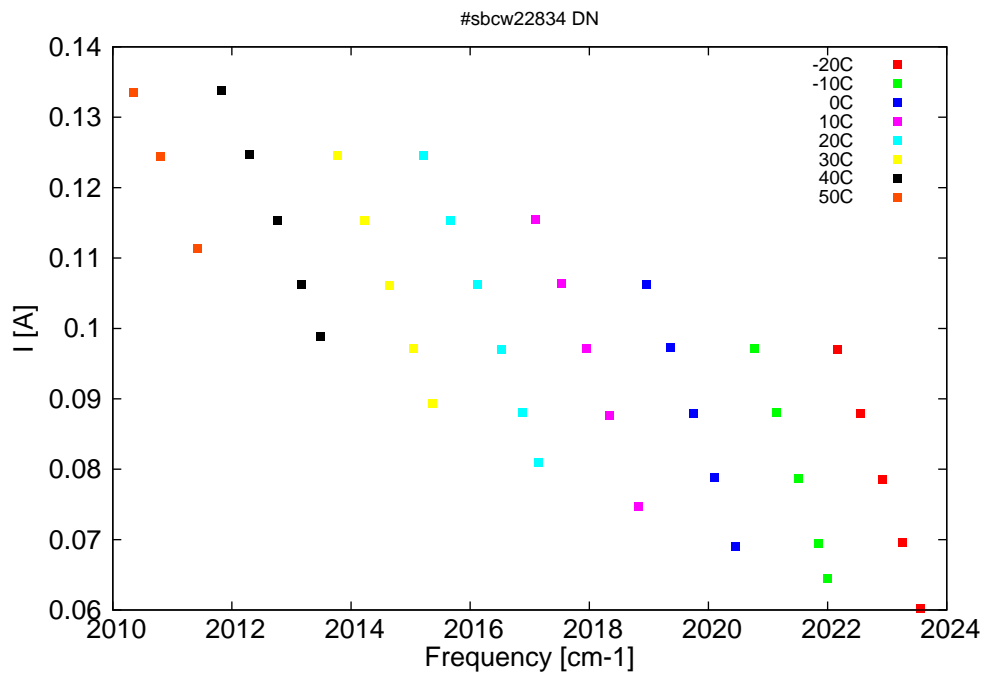


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4941.8	2023.6	0	-20	12.87	0.06
4942.5	2023.3	3.4	-20	13.2	0.07
4943.4	2022.9	7	-20	13.55	0.079
4944.2	2022.6	10.6	-20	13.93	0.088
4945.2	2022.2	13.5	-20	14.32	0.097
4945.6	2022	0.2	-10	12.82	0.064
4946	2021.9	1.8	-10	12.97	0.069
4946.8	2021.5	5.6	-10	13.3	0.079
4947.7	2021.1	9.3	-10	13.65	0.088
4948.6	2020.8	12.5	-10	14	0.097
4949.4	2020.5	0.2	0	12.78	0.069
4950.2	2020.1	3.8	0	13.08	0.079
4951.1	2019.8	7.3	0	13.4	0.088
4952.1	2019.4	10.8	0	13.73	0.097
4953	2019	13.7	0	14.06	0.106
4953.4	2018.8	0.2	10	12.78	0.075
4954.6	2018.3	4.8	10	13.18	0.088
4955.5	2017.9	8.5	10	13.5	0.097
4956.5	2017.5	11.5	10	13.81	0.106
4957.6	2017.1	14	10	14.14	0.116
4957.5	2017.2	0.2	20	12.82	0.081
4958.1	2016.9	2.4	20	13.02	0.088
4959	2016.5	5.5	20	13.29	0.097
4960	2016.1	8.5	20	13.58	0.106
4961.1	2015.7	11.2	20	13.88	0.115
4962.2	2015.2	13.2	20	14.2	0.125
4961.9	2015.4	0.3	30	12.91	0.089
4962.7	2015	2.5	30	13.12	0.097
4963.6	2014.6	5.2	30	13.38	0.106
4964.7	2014.2	7.8	30	13.66	0.115
4965.8	2013.8	10	30	13.95	0.125
4966.5	2013.5	0.3	40	13.03	0.099
4967.3	2013.2	2	40	13.22	0.106
4968.3	2012.8	4.3	40	13.47	0.115
4969.4	2012.3	6.4	40	13.74	0.125
4970.6	2011.8	8	40	14.01	0.134
4971.6	2011.4	0.2	50	13.22	0.111
4973.1	2010.8	2.6	50	13.55	0.124
4974.3	2010.3	4.2	50	13.79	0.133

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

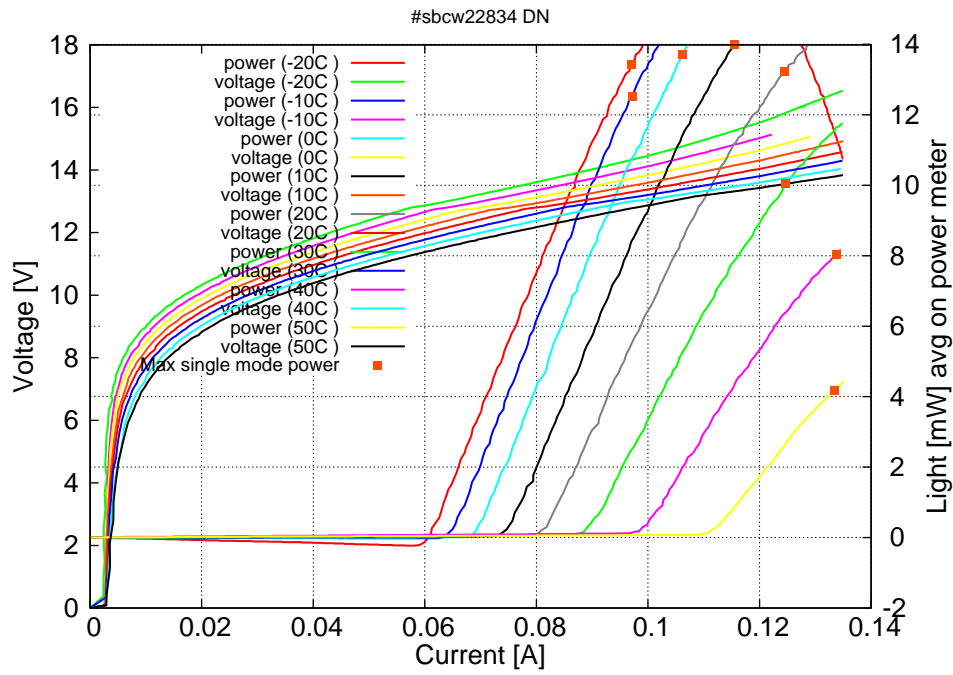


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=12.9V$ (2-wires measurements). Maximum operation current: 0.10A between -20C and -10C, 0.105A at 0C, 0.115A at 10C, 0.125A between 20C and 30C, 0.135A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

