

Datasheet for #sbcw22449 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 #sbcw22449 DN (please note that AlN submount numbering is A0MT4)

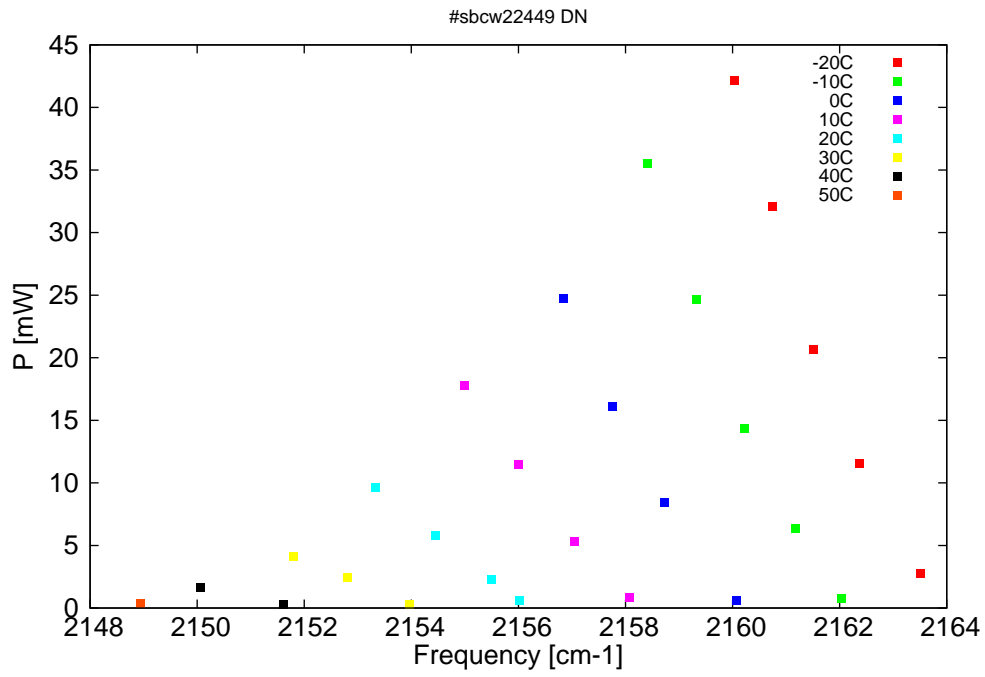


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

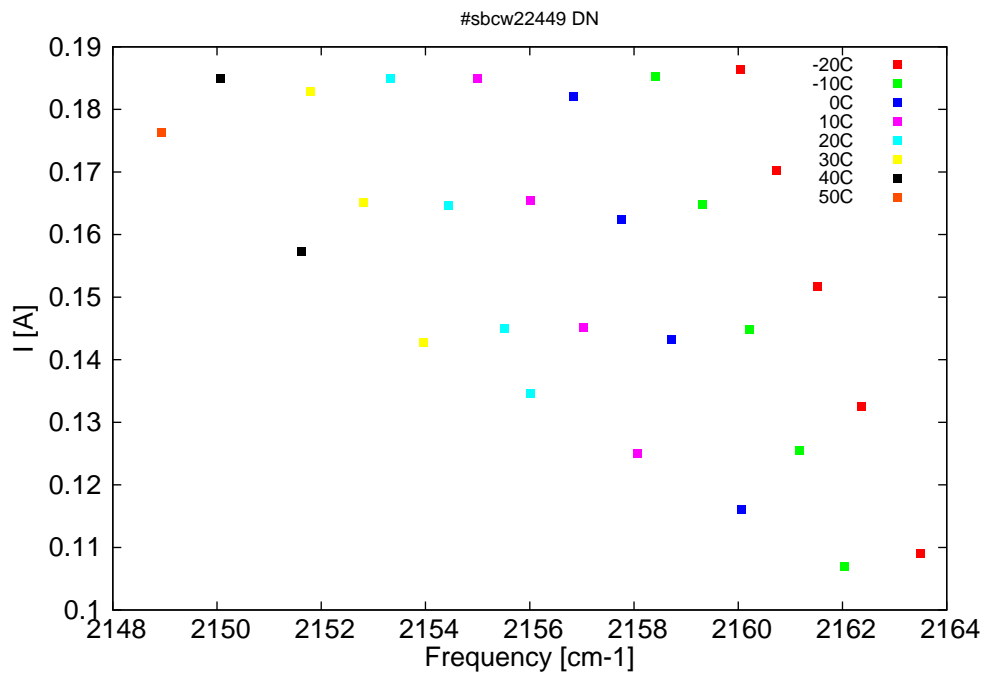


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4622.1	2163.5	2.8	-20	12.28	0.109
4624.6	2162.4	11.6	-20	12.61	0.133
4626.4	2161.5	20.7	-20	12.84	0.152
4628	2160.7	32.1	-20	13.07	0.17
4629.5	2160	42.1	-20	13.3	0.186
4625.3	2162	0.7	-10	12.13	0.107
4627.1	2161.2	6.4	-10	12.45	0.126
4629.2	2160.2	14.3	-10	12.71	0.145
4631.1	2159.3	24.7	-10	12.96	0.165
4633	2158.4	35.6	-10	13.24	0.185
4629.5	2160.1	0.6	0	12.2	0.116
4632.4	2158.7	8.4	0	12.67	0.143
4634.4	2157.8	16.1	0	12.94	0.162
4636.4	2156.8	24.8	0	13.2	0.182
4633.8	2158.1	0.8	10	12.27	0.125
4636	2157	5.3	10	12.65	0.145
4638.2	2156	11.4	10	12.97	0.165
4640.4	2155	17.8	10	13.25	0.185
4638.2	2156	0.6	20	12.36	0.135
4639.3	2155.5	2.3	20	12.55	0.145
4641.6	2154.4	5.8	20	12.92	0.165
4644	2153.3	9.7	20	13.28	0.185
4642.6	2154	0.3	30	12.43	0.143
4645.1	2152.8	2.5	30	12.83	0.165
4647.3	2151.8	4.1	30	13.17	0.183
4647.7	2151.6	0.2	40	12.58	0.157
4651	2150.1	1.6	40	13.08	0.185
4653.5	2148.9	0.4	50	12.8	0.176

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

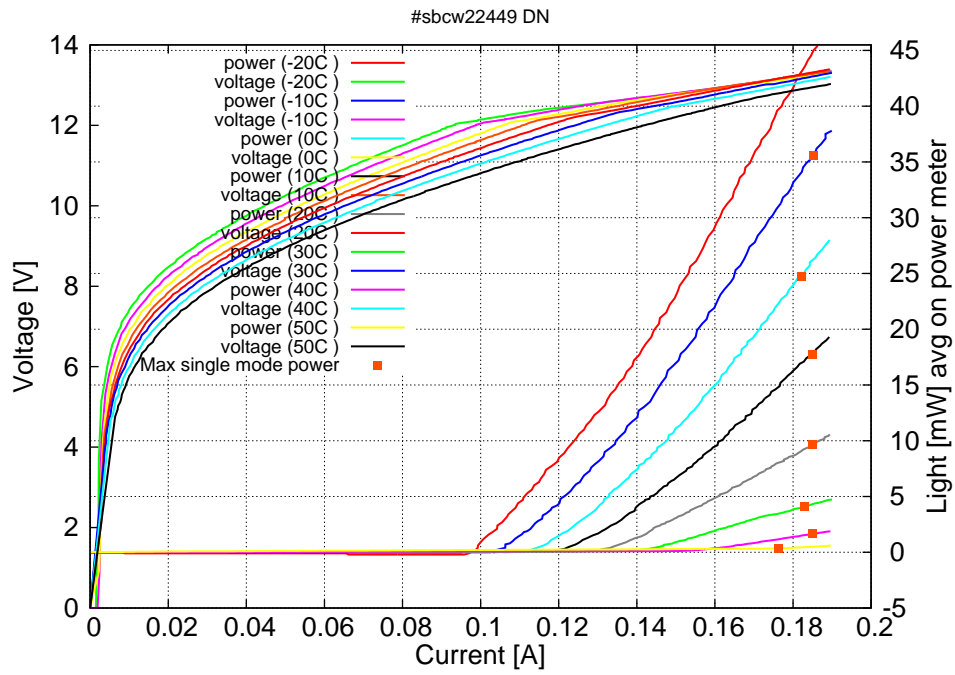


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=12.1V$ (2-wires measurements). Maximum operation current: 0.19A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

