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Datasheet for #sbcw22448 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.

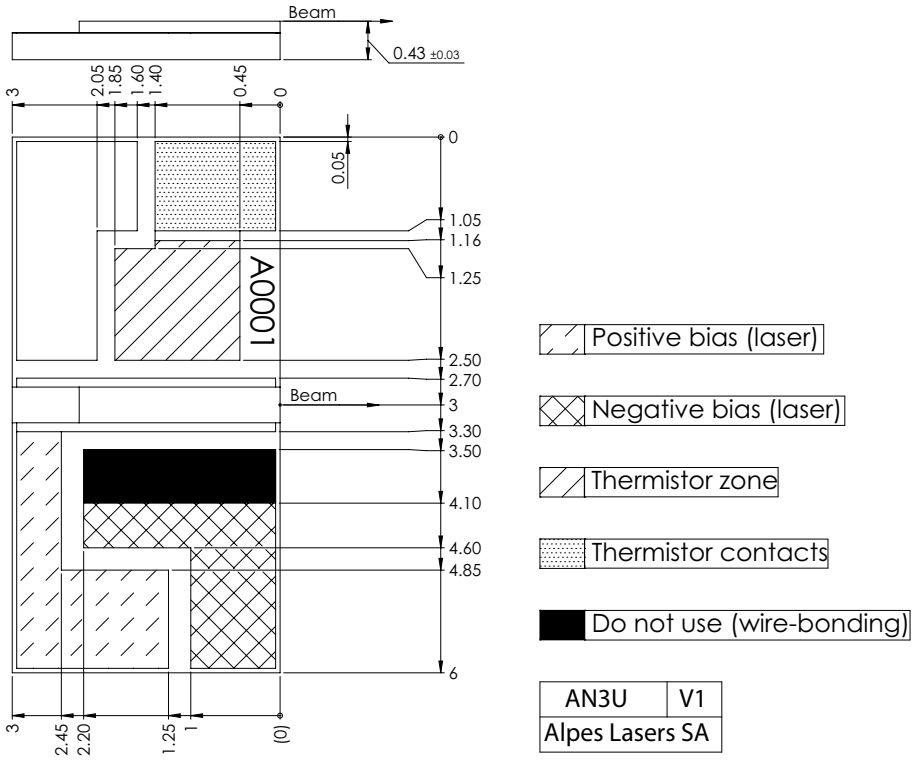

Figure 1: Mechanical and electrical interface for #sbcw22448 DN (please note that AlN submount numbering is A0NWW)

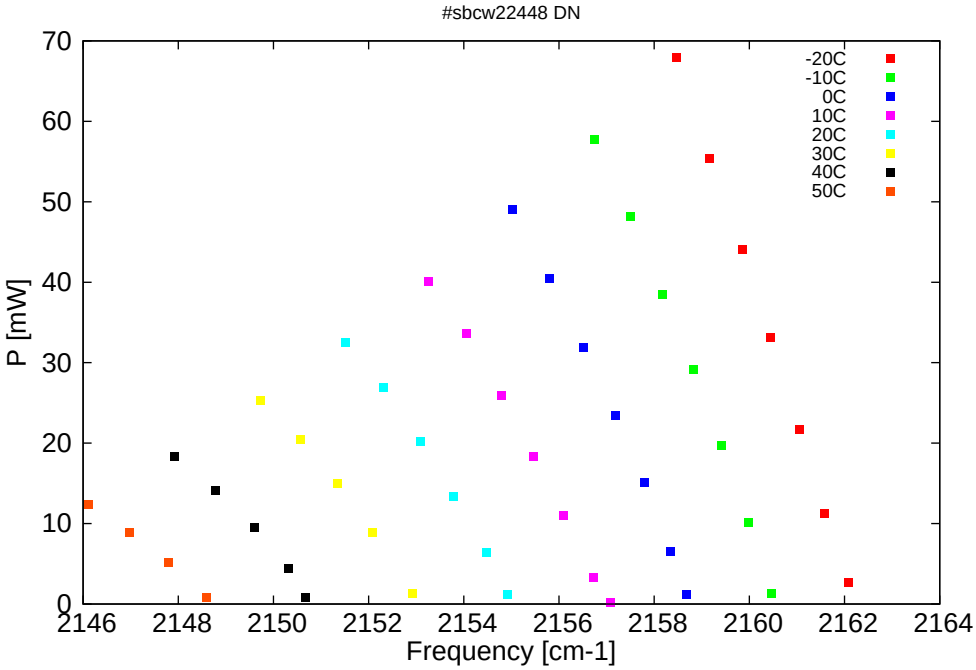

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

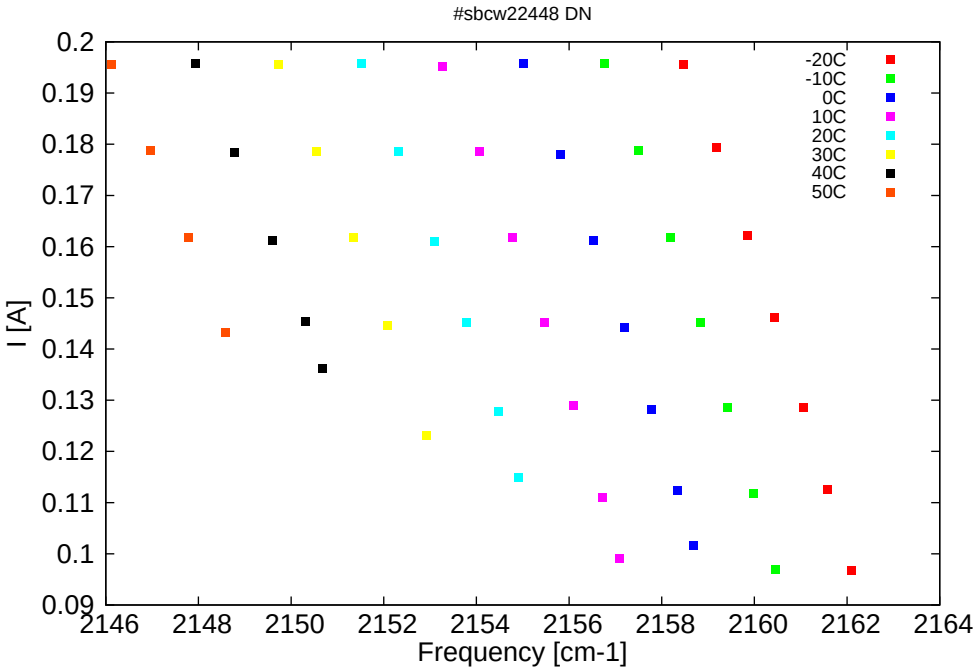

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
4625.2	2162.1	2.7	-20	11.54	0.097
4626.3	2161.6	11.3	-20	11.66	0.113
4627.4	2161.1	21.7	-20	11.79	0.129
4628.7	2160.4	33.2	-20	11.96	0.146
4630	2159.8	44	-20	12.13	0.162
4631.4	2159.2	55.4	-20	12.34	0.179
4632.9	2158.5	67.9	-20	12.56	0.196
4628.6	2160.5	1.4	-10	11.48	0.097
4629.7	2160	10.1	-10	11.58	0.112
4630.9	2159.4	19.7	-10	11.73	0.129
4632.1	2158.8	29.2	-10	11.88	0.145
4633.5	2158.2	38.5	-10	12.06	0.162
4635	2157.5	48.1	-10	12.27	0.179
4636.6	2156.8	57.7	-10	12.5	0.196
4632.4	2158.7	1.2	0	11.47	0.102
4633.2	2158.4	6.5	0	11.54	0.112
4634.4	2157.8	15.1	0	11.67	0.128
4635.6	2157.2	23.4	0	11.82	0.144
4637.1	2156.5	31.9	0	12	0.161
4638.6	2155.8	40.5	0	12.21	0.178
4640.3	2155	49	0	12.43	0.196
4635.9	2157.1	0.1	10	11.44	0.099
4636.7	2156.7	3.3	10	11.5	0.111
4638	2156.1	11	10	11.63	0.129
4639.4	2155.5	18.4	10	11.78	0.145
4640.8	2154.8	26	10	11.96	0.162
4642.4	2154.1	33.6	10	12.15	0.179
4644.1	2153.3	40.1	10	12.37	0.195
4640.6	2154.9	1.1	20	11.51	0.115
4641.5	2154.5	6.4	20	11.6	0.128
4643	2153.8	13.4	20	11.75	0.145
4644.5	2153.1	20.2	20	11.91	0.161
4646.2	2152.3	26.9	20	12.11	0.179
4647.9	2151.5	32.6	20	12.32	0.196
4644.9	2152.9	1.3	30	11.56	0.123
4646.7	2152.1	8.9	30	11.72	0.145
4648.3	2151.3	15	30	11.88	0.162
4650	2150.6	20.5	30	12.06	0.179
4651.8	2149.7	25.3	30	12.26	0.196
4649.7	2150.7	0.9	40	11.64	0.136
4650.5	2150.3	4.4	40	11.71	0.145
4652	2149.6	9.5	40	11.85	0.161
4653.8	2148.8	14.1	40	12.02	0.178
4655.7	2147.9	18.3	40	12.22	0.196
4654.2	2148.6	0.8	50	11.71	0.143
4655.9	2147.8	5.1	50	11.84	0.162
4657.7	2147	8.9	50	12	0.179
4659.6	2146.1	12.4	50	12.19	0.196

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λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]

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

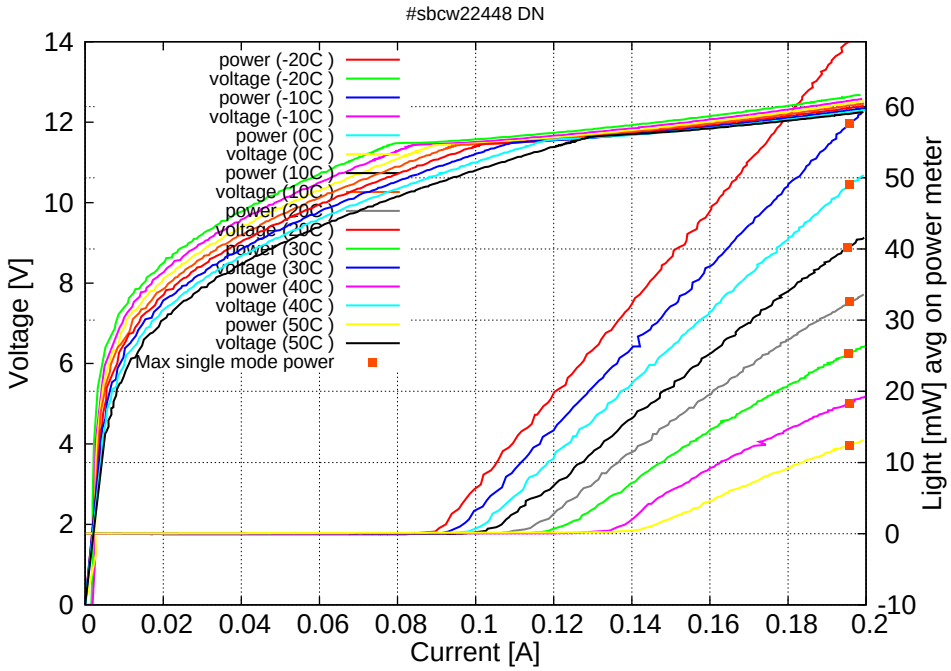

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.09A / Vth=11.5V (2-wires measurements). Maximum operation current: 0.20A for all temperatures.

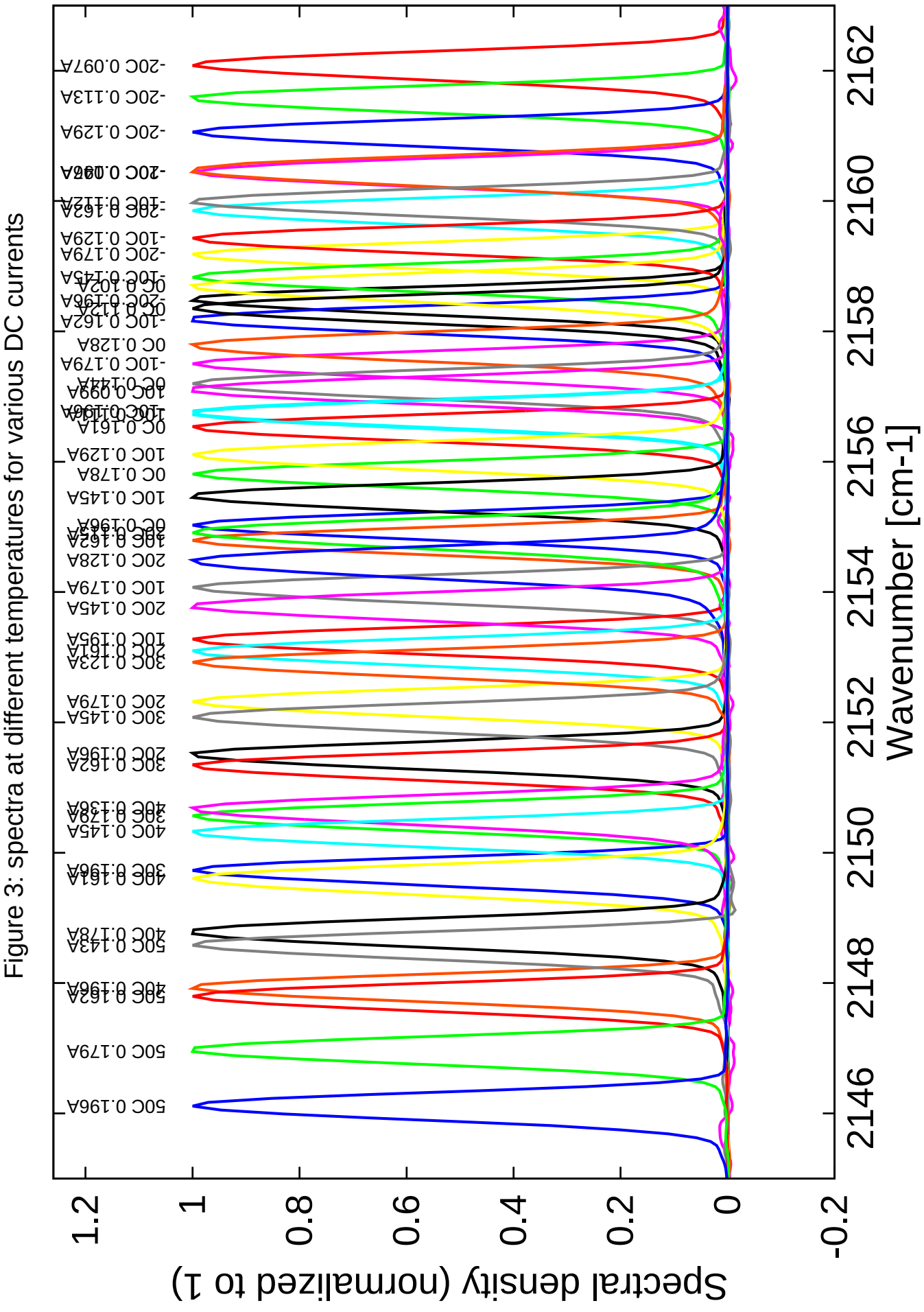

Figure 3: spectra at different temperatures for various DC currents