

Datasheet for #sbcw20447 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 #sbcw20447 DN

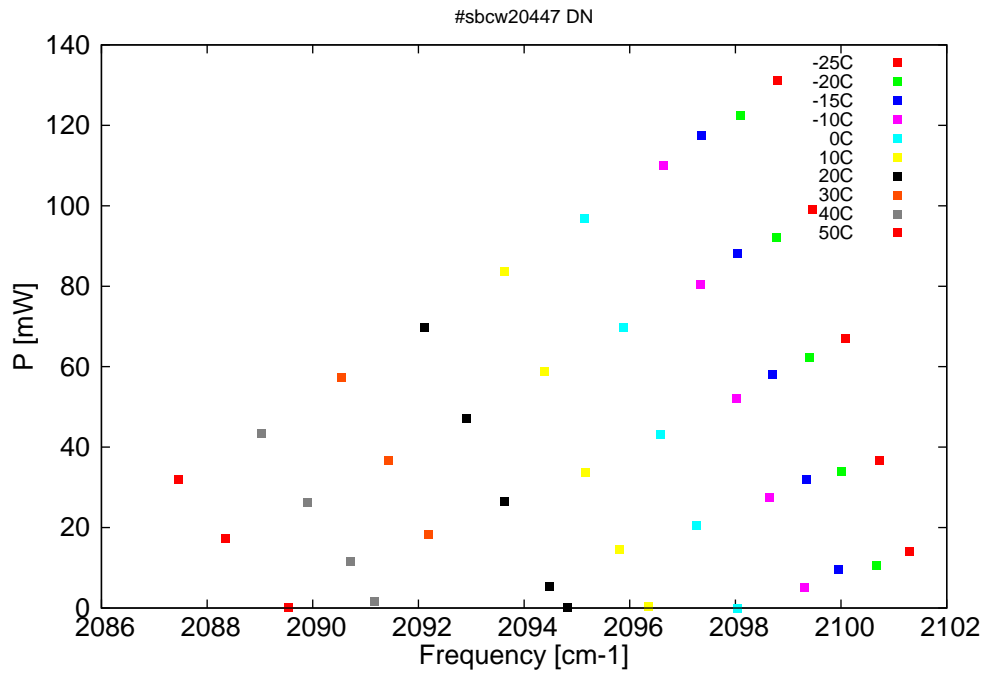


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

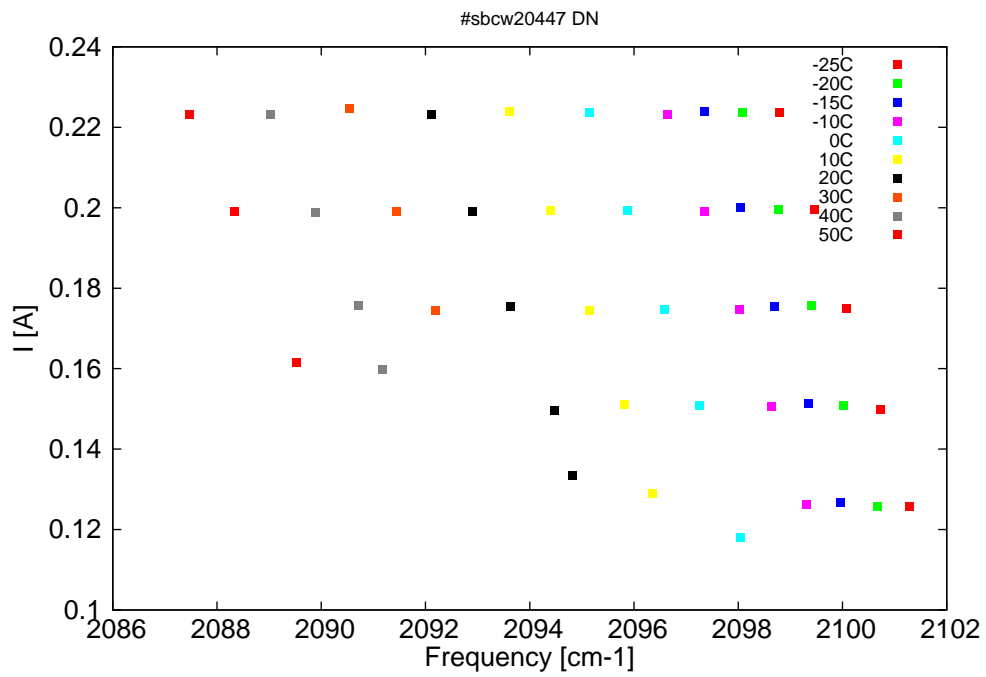


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4759	2101.3	13.9	-25	11.26	0.126
4760.3	2100.7	36.8	-25	11.42	0.15
4761.7	2100.1	67	-25	11.61	0.175
4763.1	2099.5	99.1	-25	11.81	0.199
4764.6	2098.8	131.1	-25	12.03	0.224
4760.4	2100.7	10.7	-20	11.24	0.126
4761.9	2100	34	-20	11.4	0.151
4763.2	2099.4	62.3	-20	11.59	0.176
4764.7	2098.8	92.2	-20	11.79	0.2
4766.2	2098.1	122.4	-20	12	0.224
4762	2100	9.7	-15	11.22	0.127
4763.4	2099.3	31.9	-15	11.38	0.151
4764.9	2098.7	58.1	-15	11.57	0.176
4766.4	2098	88.1	-15	11.77	0.2
4767.9	2097.4	117.4	-15	11.98	0.224
4763.5	2099.3	5.2	-10	11.2	0.126
4765	2098.6	27.4	-10	11.36	0.151
4766.4	2098	52	-10	11.54	0.175
4767.9	2097.3	80.4	-10	11.74	0.199
4769.5	2096.6	110	-10	11.96	0.223
4766.4	2098	0	0	11.17	0.118
4768.1	2097.3	20.5	0	11.31	0.151
4769.7	2096.6	43.2	0	11.49	0.175
4771.3	2095.9	69.9	0	11.69	0.199
4772.9	2095.1	96.8	0	11.91	0.224
4770.2	2096.4	0.3	10	11.19	0.129
4771.4	2095.8	14.7	10	11.28	0.151
4772.9	2095.2	33.7	10	11.44	0.174
4774.6	2094.4	58.9	10	11.65	0.199
4776.4	2093.6	83.8	10	11.87	0.224
4773.7	2094.8	0.1	20	11.2	0.133
4774.5	2094.5	5.2	20	11.24	0.15
4776.4	2093.6	26.5	20	11.41	0.175
4778	2092.9	47.1	20	11.61	0.199
4779.9	2092.1	69.7	20	11.83	0.223
4779.7	2092.2	18.2	30	11.37	0.174
4781.4	2091.4	36.7	30	11.57	0.199
4783.5	2090.5	57.2	30	11.8	0.225
4782	2091.2	1.6	40	11.28	0.16
4783.1	2090.7	11.5	40	11.35	0.176
4784.9	2089.9	26.2	40	11.53	0.199
4786.9	2089	43.4	40	11.74	0.223
4785.8	2089.5	0.2	50	11.32	0.161
4788.5	2088.3	17.3	50	11.5	0.199
4790.5	2087.5	31.9	50	11.71	0.223

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

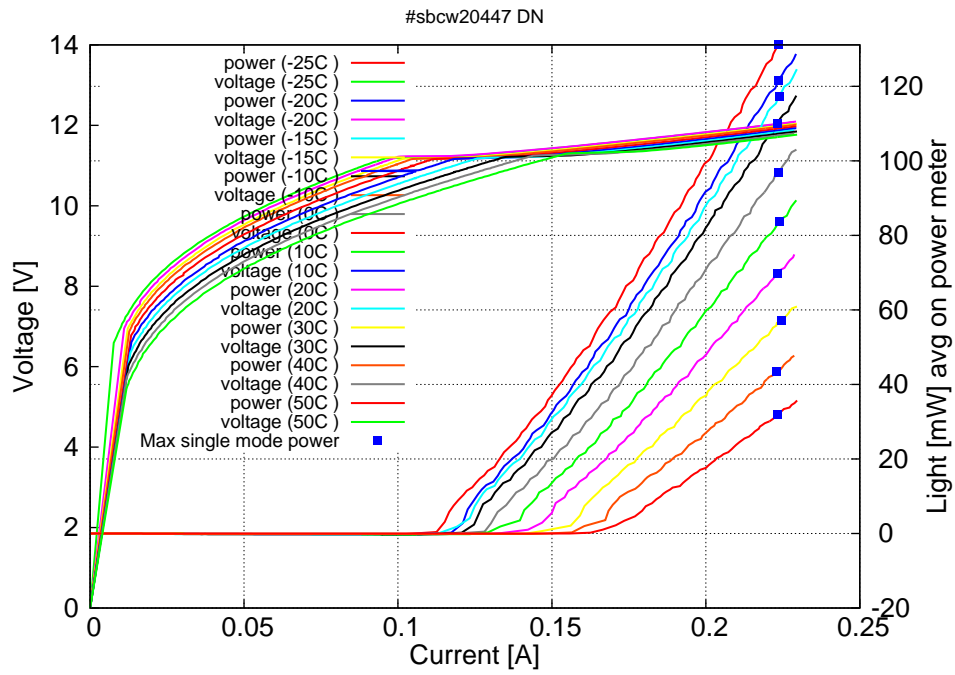


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=11.2V$ (2-wires measurements). Maximum operation current: 0.23A for all temperatures.

