

Datasheet for #sbcw21074 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 #sbcw21074 DN (please note that AlN submount numbering is A0M5E)

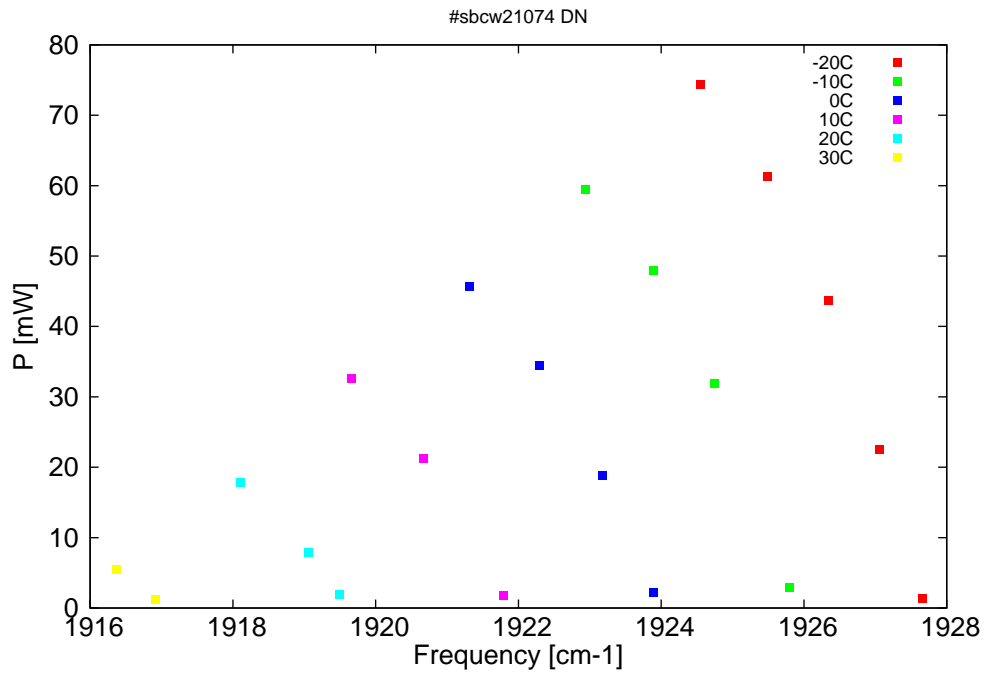


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

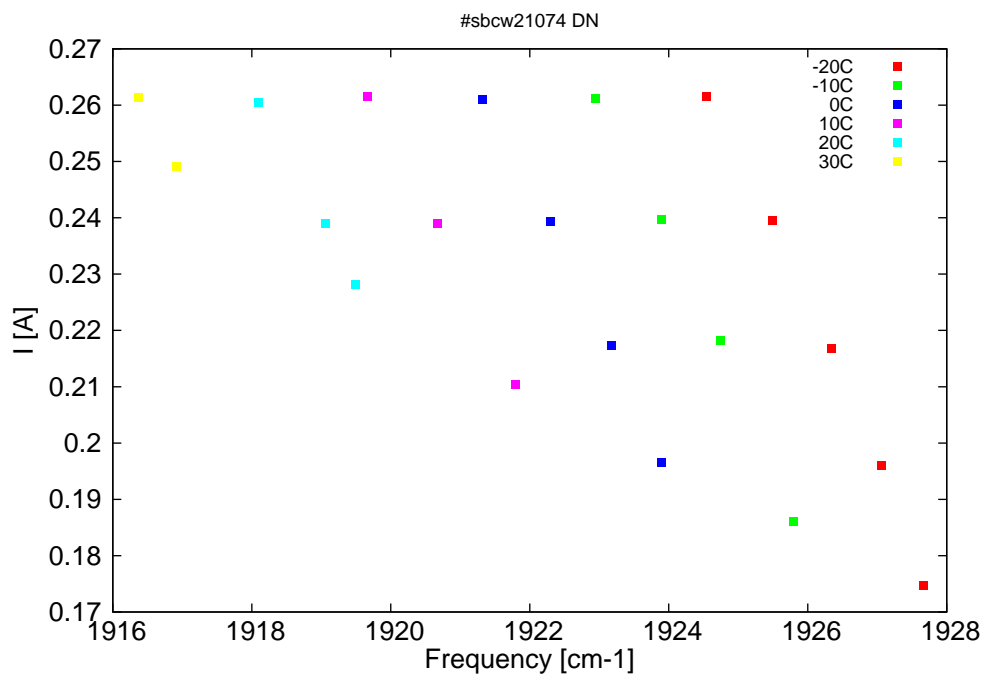


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5187.6	1927.7	1.3	-20	10.91	0.175
5189.2	1927.1	22.5	-20	11.05	0.196
5191.2	1926.3	43.7	-20	11.26	0.217
5193.5	1925.5	61.3	-20	11.55	0.239
5196	1924.5	74.3	-20	11.89	0.261
5192.7	1925.8	2.9	-10	10.94	0.186
5195.5	1924.7	31.9	-10	11.22	0.218
5197.8	1923.9	47.9	-10	11.48	0.24
5200.4	1922.9	59.4	-10	11.81	0.261
5197.8	1923.9	2.2	0	10.97	0.197
5199.7	1923.2	18.9	0	11.15	0.217
5202.1	1922.3	34.5	0	11.42	0.239
5204.8	1921.3	45.7	0	11.73	0.261
5203.5	1921.8	1.8	10	11.06	0.21
5206.5	1920.7	21.3	10	11.36	0.239
5209.3	1919.7	32.7	10	11.66	0.262
5209.7	1919.5	1.9	20	11.2	0.228
5210.9	1919.1	7.9	20	11.31	0.239
5213.5	1918.1	17.8	20	11.59	0.26
5216.7	1916.9	1.1	30	11.4	0.249
5218.2	1916.4	5.4	30	11.54	0.261

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

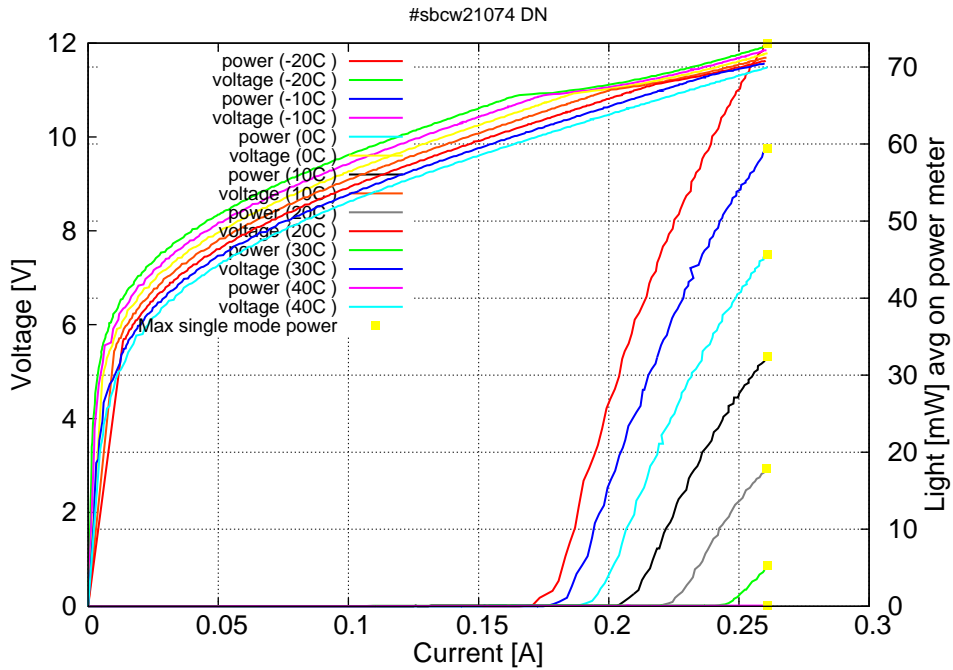


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=10.9V$ (2-wires measurements). Maximum operation

current: 0.261A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

