

Datasheet for #sbcw20478 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 #sbcw20478 DN

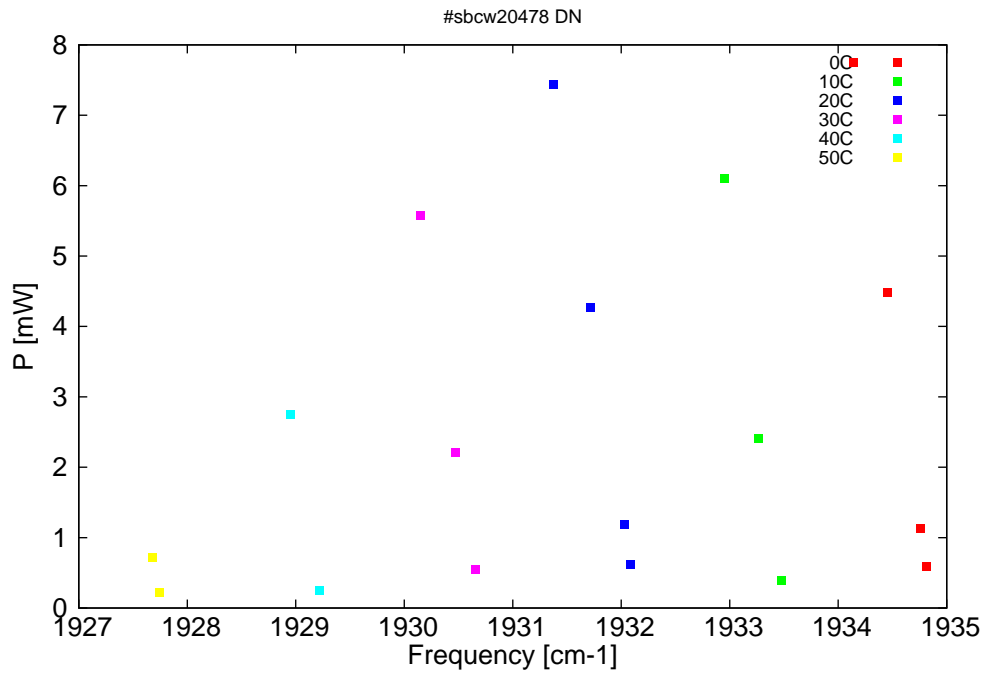


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

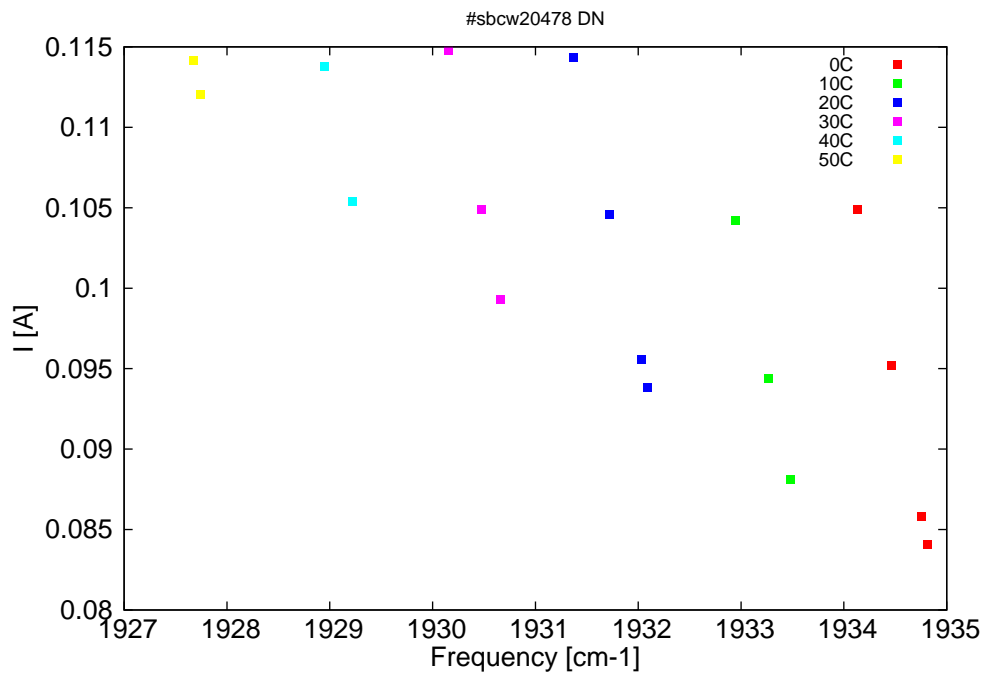


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5168.5	1934.8	0.6	0	12.31	0.084
5168.6	1934.8	1.1	0	12.36	0.086
5169.4	1934.5	4.5	0	12.66	0.095
5170.3	1934.1	7.8	0	12.99	0.105
5172	1933.5	0.4	10	12.28	0.088
5172.6	1933.3	2.4	10	12.46	0.094
5173.4	1932.9	6.1	10	12.76	0.104
5175.7	1932.1	0.6	20	12.28	0.094
5175.9	1932	1.2	20	12.33	0.096
5176.7	1931.7	4.3	20	12.6	0.105
5177.7	1931.4	7.4	20	12.9	0.114
5179.6	1930.7	0.5	30	12.3	0.099
5180.1	1930.5	2.2	30	12.44	0.105
5180.9	1930.2	5.6	30	12.71	0.115
5183.4	1929.2	0.3	40	12.31	0.105
5184.2	1928.9	2.8	40	12.52	0.114
5187.4	1927.7	0.2	50	12.34	0.112
5187.6	1927.7	0.7	50	12.39	0.114

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

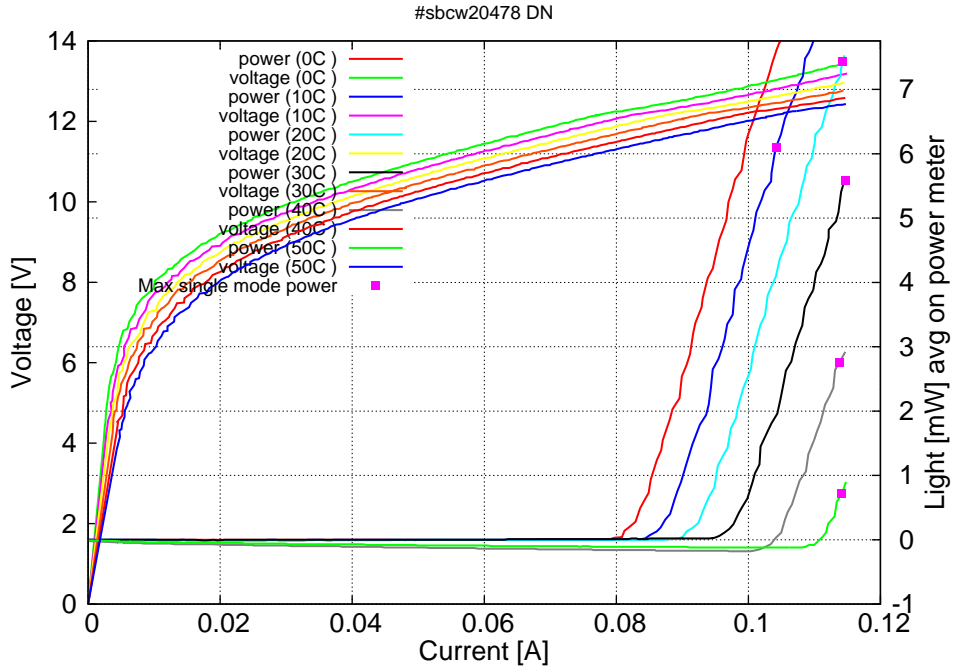


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.08A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.105A between 0C and 10C, 0.115A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

