

Datasheet for #sbcw23747 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 #sbcw23747 DN

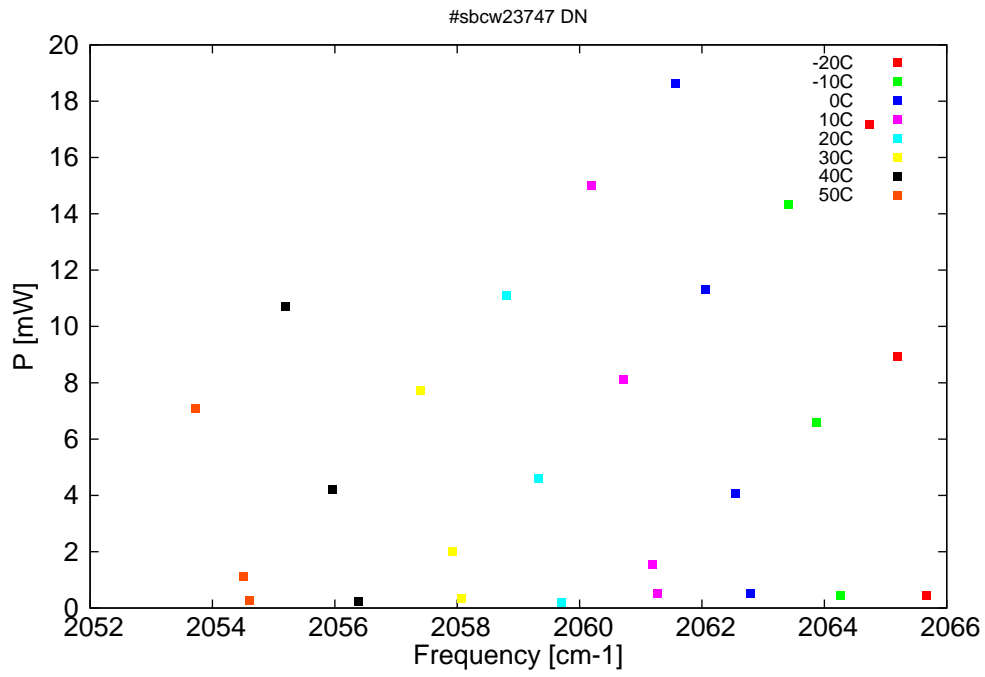


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

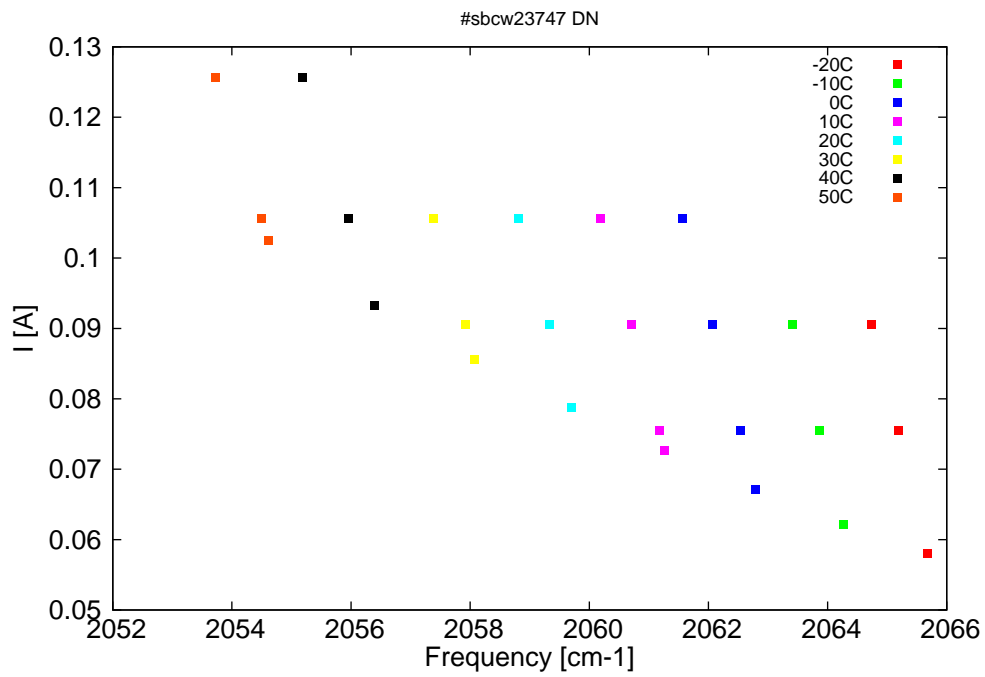


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4841	2065.7	0.4	-20	11.78	0.058
4842.2	2065.2	8.9	-20	12.26	0.076
4843.2	2064.7	17.2	-20	12.65	0.091
4844.3	2064.3	0.4	-10	11.76	0.062
4845.3	2063.9	6.6	-10	12.11	0.076
4846.3	2063.4	14.3	-10	12.49	0.091
4847.8	2062.8	0.5	0	11.77	0.067
4848.4	2062.5	4.1	0	11.98	0.076
4849.5	2062.1	11.3	0	12.35	0.091
4850.7	2061.6	18.6	0	12.7	0.106
4851.4	2061.3	0.5	10	11.81	0.073
4851.6	2061.2	1.5	10	11.87	0.076
4852.7	2060.7	8.1	10	12.22	0.091
4853.9	2060.2	15	10	12.57	0.106
4855.1	2059.7	0.2	20	11.86	0.079
4856	2059.3	4.6	20	12.11	0.091
4857.2	2058.8	11.1	20	12.46	0.106
4858.9	2058.1	0.4	30	11.94	0.086
4859.3	2057.9	2	30	12.03	0.091
4860.5	2057.4	7.7	30	12.36	0.106
4862.9	2056.4	0.2	40	12.04	0.093
4863.9	2056	4.2	40	12.27	0.106
4865.7	2055.2	10.7	40	12.69	0.126
4867.1	2054.6	0.3	50	12.17	0.103
4867.4	2054.5	1.1	50	12.21	0.106
4869.2	2053.7	7.1	50	12.61	0.126

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

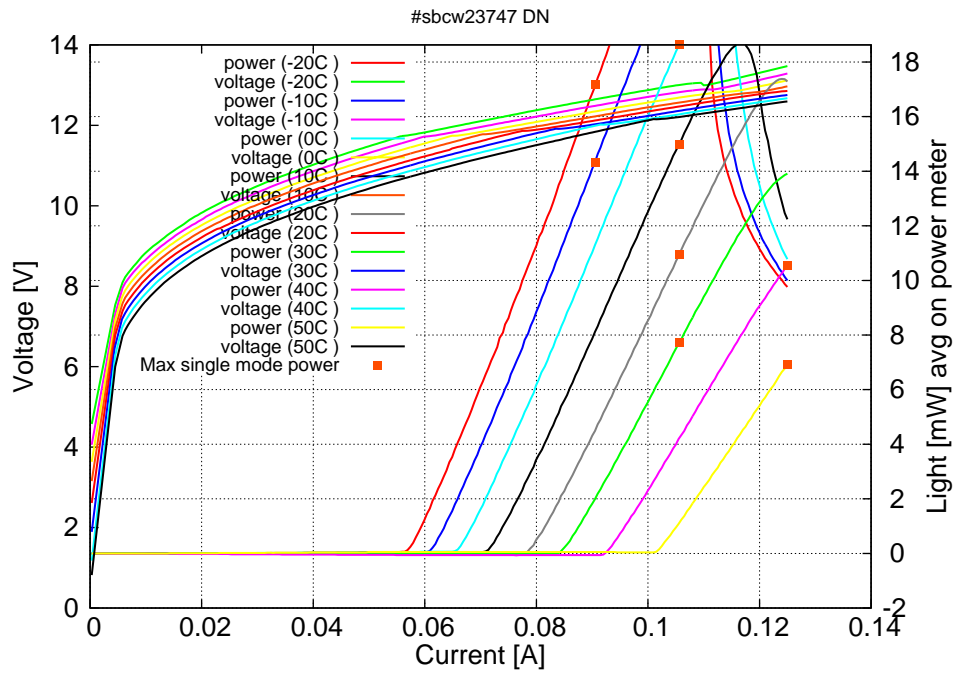


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=11.7V$ (2-wires measurements). Maximum operation current: 0.09A between -20C and -10C, 0.105A between 0C and 30C, 0.125A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

