

Datasheet for #sbcw17412 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 #sbcw17412 DN

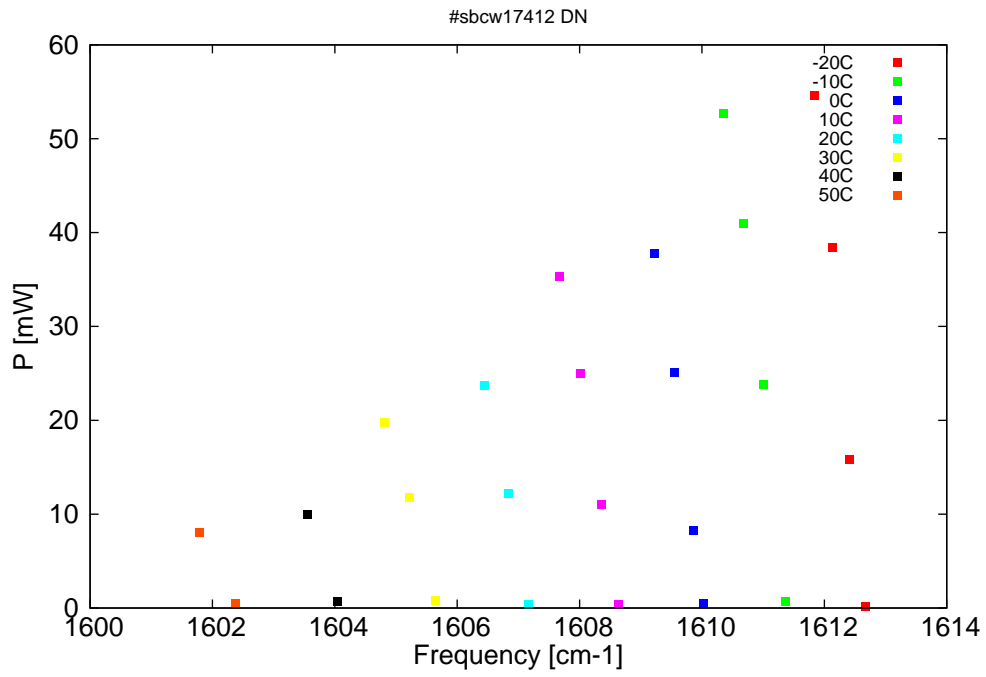


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

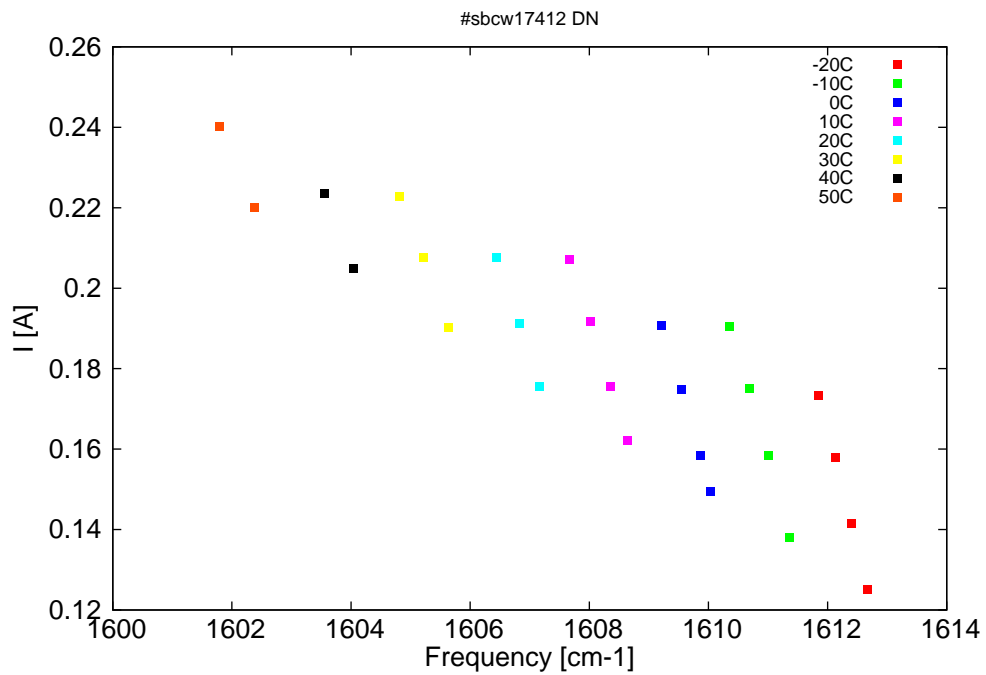


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6200.9	1612.7	0.2	-20	9.07	0.125
6201.9	1612.4	15.8	-20	9.25	0.141
6203	1612.1	38.4	-20	9.42	0.158
6204.1	1611.8	54.6	-20	9.59	0.173
6205.9	1611.4	0.7	-10	9.15	0.138
6207.3	1611	23.8	-10	9.37	0.158
6208.5	1610.7	41	-10	9.55	0.175
6209.8	1610.4	52.7	-10	9.71	0.19
6211.1	1610	0.5	0	9.22	0.15
6211.7	1609.9	8.2	0	9.33	0.158
6212.9	1609.6	25.1	0	9.5	0.175
6214.2	1609.2	37.8	0	9.67	0.191
6216.5	1608.6	0.4	10	9.32	0.162
6217.5	1608.4	11	10	9.47	0.176
6218.8	1608	25	10	9.65	0.192
6220.2	1607.7	35.3	10	9.81	0.207
6222.1	1607.2	0.4	20	9.42	0.176
6223.4	1606.8	12.2	20	9.6	0.191
6225	1606.4	23.7	20	9.78	0.208
6228.1	1605.6	0.8	30	9.54	0.19
6229.7	1605.2	11.8	30	9.74	0.208
6231.2	1604.8	19.8	30	9.91	0.223
6234.2	1604	0.7	40	9.67	0.205
6236.2	1603.6	9.9	40	9.89	0.224
6240.7	1602.4	0.5	50	9.8	0.22
6243	1601.8	8	50	10.04	0.24

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

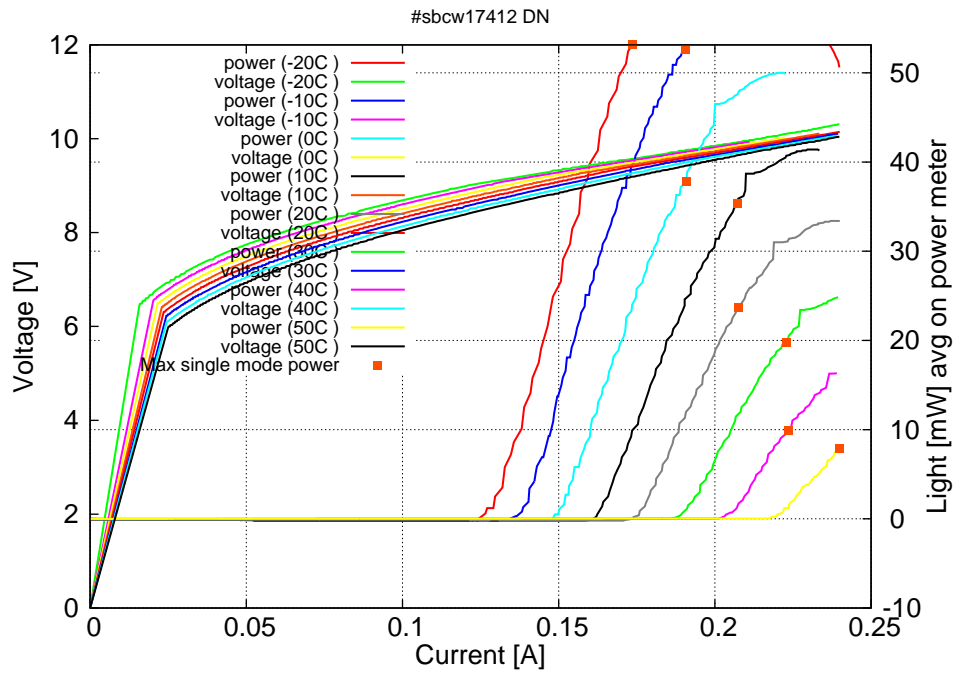


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.175 at -20C, 0.19A at -10C and 0C, 0.21A at 10C, 0.215A at 20C, 0.225A at 30C, 0.235A at 40C and 0.24A at 50C.

Figure 3: spectra at different temperatures for various DC currents

