

**Datasheet for #sbcw13375 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 #sbcw13375 DN

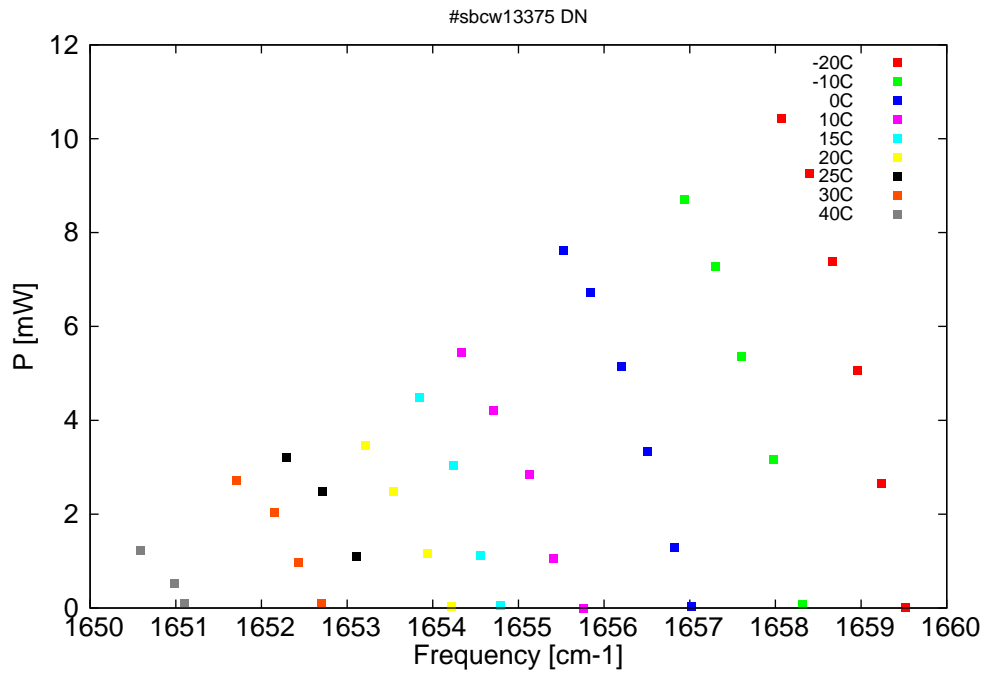


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

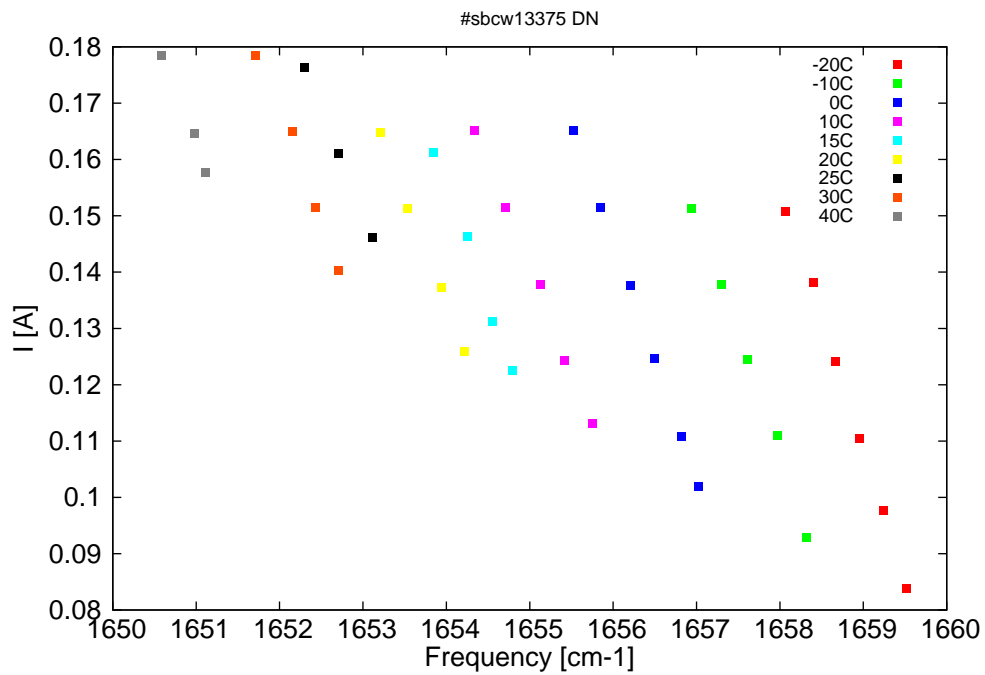


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6025.9	1659.5	0	-20	9.29	0.084
6026.9	1659.2	2.7	-20	9.54	0.098
6027.9	1659	5.1	-20	9.76	0.111
6028.9	1658.7	7.4	-20	9.99	0.124
6029.9	1658.4	9.3	-20	10.23	0.138
6031.1	1658.1	10.4	-20	10.46	0.151
6030.2	1658.3	0.1	-10	9.37	0.093
6031.5	1658	3.2	-10	9.69	0.111
6032.8	1657.6	5.4	-10	9.91	0.124
6033.9	1657.3	7.3	-10	10.15	0.138
6035.2	1656.9	8.7	-10	10.39	0.151
6034.9	1657	0	0	9.46	0.102
6035.6	1656.8	1.3	0	9.61	0.111
6036.8	1656.5	3.3	0	9.85	0.125
6037.9	1656.2	5.1	0	10.07	0.138
6039.2	1655.8	6.7	0	10.31	0.151
6040.4	1655.5	7.6	0	10.56	0.165
6039.5	1655.8	0	10	9.58	0.113
6040.8	1655.4	1.1	10	9.77	0.124
6041.8	1655.1	2.8	10	10	0.138
6043.4	1654.7	4.2	10	10.24	0.151
6044.7	1654.3	5.4	10	10.48	0.165
6043	1654.8	0.1	15	9.7	0.123
6043.9	1654.6	1.1	15	9.84	0.131
6045	1654.2	3	15	10.1	0.146
6046.5	1653.8	4.5	15	10.37	0.161
6045.1	1654.2	0	20	9.73	0.126
6046.2	1653.9	1.2	20	9.93	0.137
6047.6	1653.5	2.5	20	10.16	0.151
6048.8	1653.2	3.5	20	10.4	0.165
6049.2	1653.1	1.1	25	10.03	0.146
6050.7	1652.7	2.5	25	10.29	0.161
6052.2	1652.3	3.2	25	10.56	0.176
6050.7	1652.7	0.1	30	9.91	0.14
6051.7	1652.4	1	30	10.1	0.152
6052.7	1652.2	2	30	10.33	0.165
6054.3	1651.7	2.7	30	10.56	0.179
6056.5	1651.1	0.1	40	10.13	0.158
6057	1651	0.5	40	10.25	0.165
6058.5	1650.6	1.2	40	10.49	0.178

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

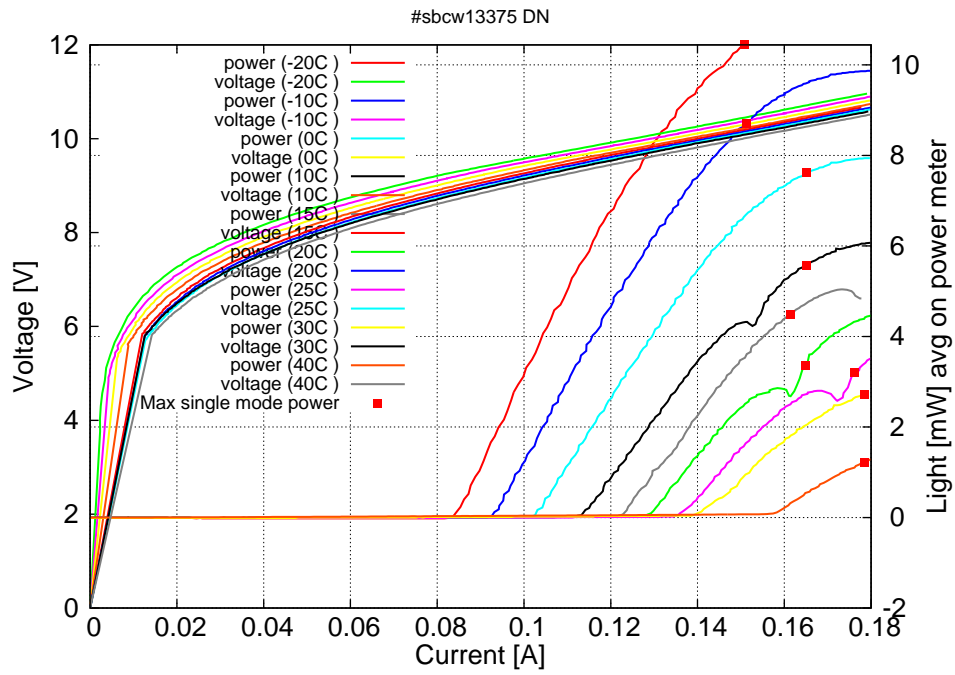


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.08A$  /  $V_{th}=9.3V$  (2-wires measurements). Maximum operation current: 0.15A between -20C and -10C, 0.165A between 0C and 20C, 0.18A between 25C and 50C.

Figure 3: spectra at different temperatures for various DC currents

