

**Datasheet for #sbcw17016 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 #sbcw17016 DN

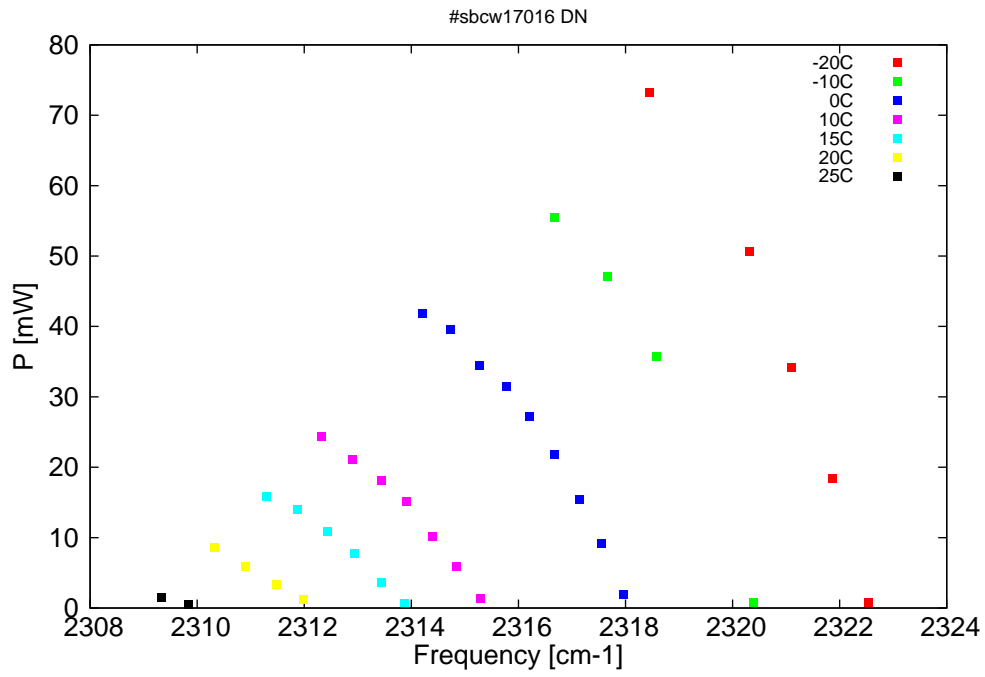


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

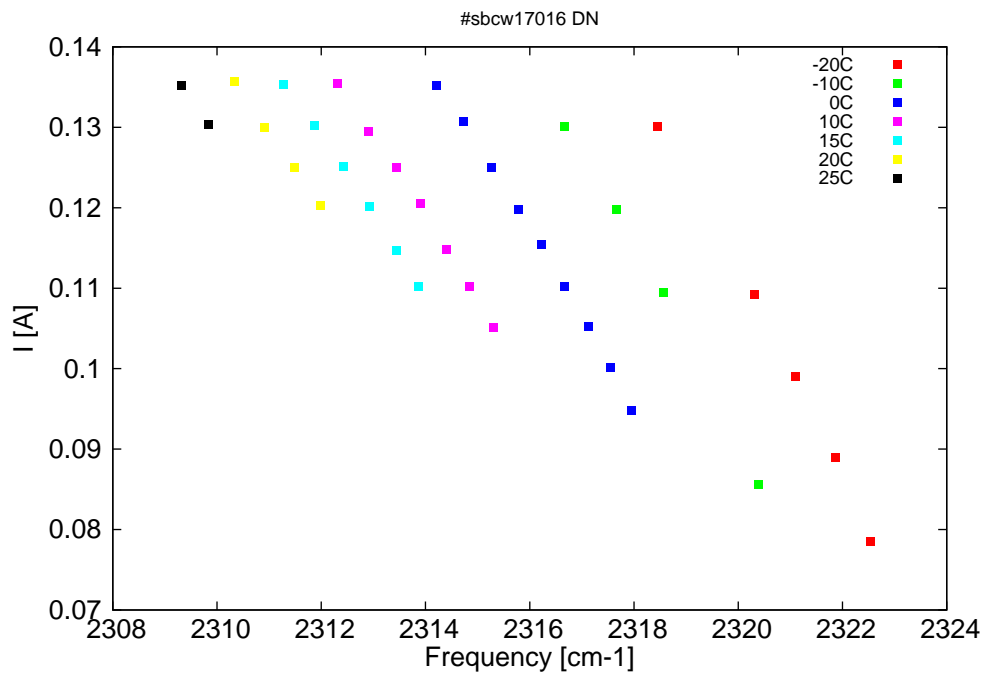


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4305.6	2322.5	0.8	-20	12.97	0.079
4306.9	2321.9	18.5	-20	13.21	0.089
4308.3	2321.1	34.2	-20	13.46	0.099
4309.7	2320.3	50.6	-20	13.7	0.109
4313.2	2318.4	73.3	-20	14.21	0.13
4309.6	2320.4	0.8	-10	13.05	0.086
4313	2318.6	35.8	-10	13.62	0.109
4314.7	2317.7	47.1	-10	13.87	0.12
4316.5	2316.7	55.5	-10	14.12	0.13
4314.1	2318	2	0	13.24	0.095
4314.9	2317.6	9.2	0	13.36	0.1
4315.7	2317.1	15.4	0	13.48	0.105
4316.5	2316.7	21.9	0	13.61	0.11
4317.4	2316.2	27.2	0	13.73	0.115
4318.2	2315.8	31.4	0	13.84	0.12
4319.1	2315.3	34.4	0	13.97	0.125
4320.2	2314.7	39.5	0	14.11	0.131
4321.1	2314.2	41.9	0	14.23	0.135
4319.1	2315.3	1.3	10	13.42	0.105
4319.9	2314.8	5.9	10	13.54	0.11
4320.8	2314.4	10.1	10	13.65	0.115
4321.7	2313.9	15.1	10	13.78	0.121
4322.6	2313.4	18.1	10	13.9	0.125
4323.6	2312.9	21.2	10	14.02	0.13
4324.7	2312.3	24.4	10	14.15	0.135
4321.8	2313.9	0.7	15	13.53	0.11
4322.5	2313.5	3.6	15	13.64	0.115
4323.5	2312.9	7.7	15	13.76	0.12
4324.5	2312.4	10.9	15	13.88	0.125
4325.5	2311.9	14	15	14.01	0.13
4326.6	2311.3	15.9	15	14.14	0.135
4325.3	2312	1.2	20	13.75	0.12
4326.2	2311.5	3.4	20	13.86	0.125
4327.3	2310.9	6	20	13.99	0.13
4328.4	2310.3	8.5	20	14.12	0.136
4329.3	2309.8	0.5	25	14	0.13
4330.3	2309.3	1.4	25	14.12	0.135

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

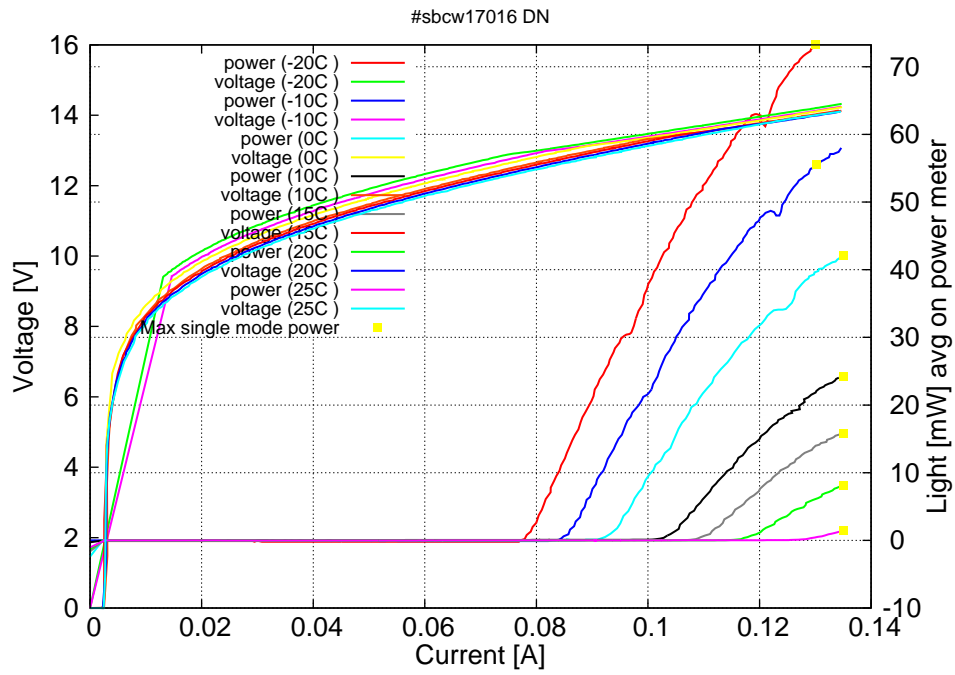


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.08A$  /  $V_{th}=12.9V$  (2-wires measurements). Maximum operation current: 0.135A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

