

**Datasheet for #sbcw20417 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 bias and positive bias on the specific zones drawn below. 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.

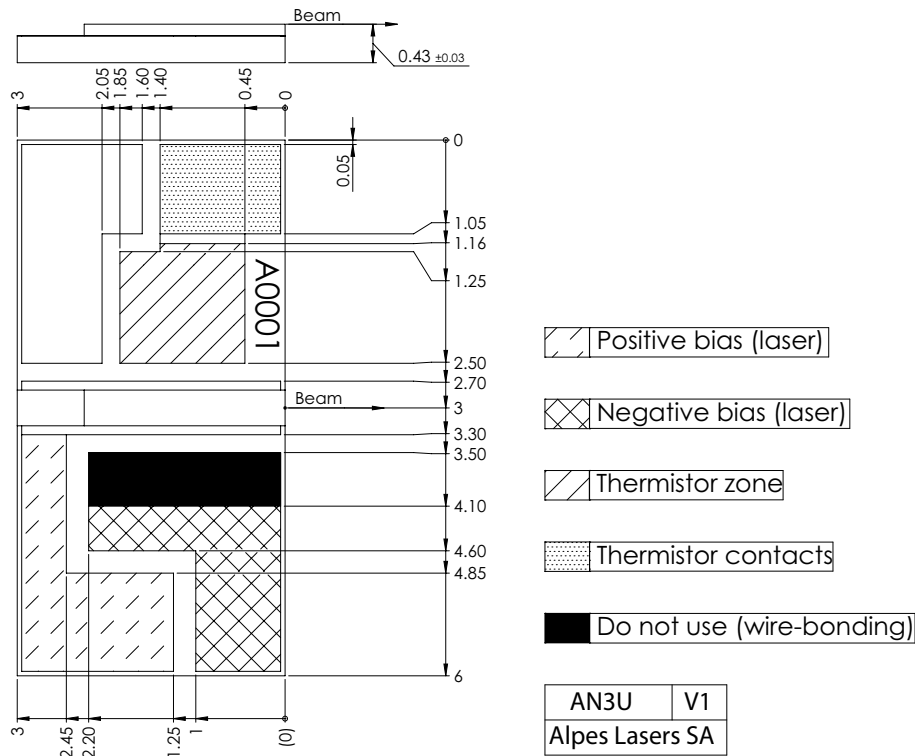


Figure 1: Mechanical and electrical interface for #sbcw20417 DN (please note that AlN submount numbering is A0P6P)

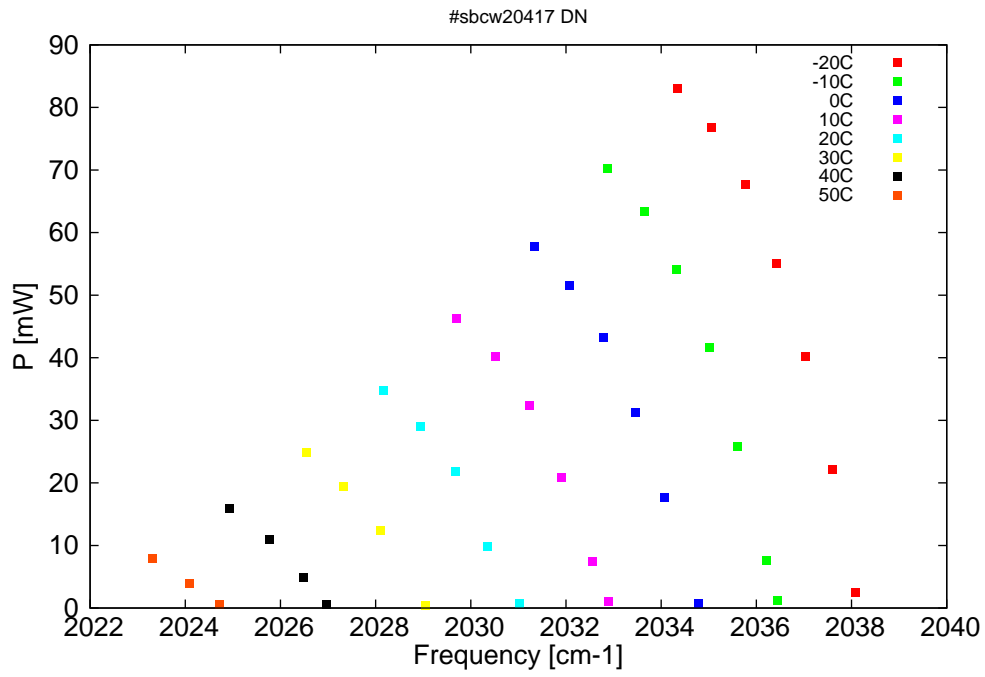


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

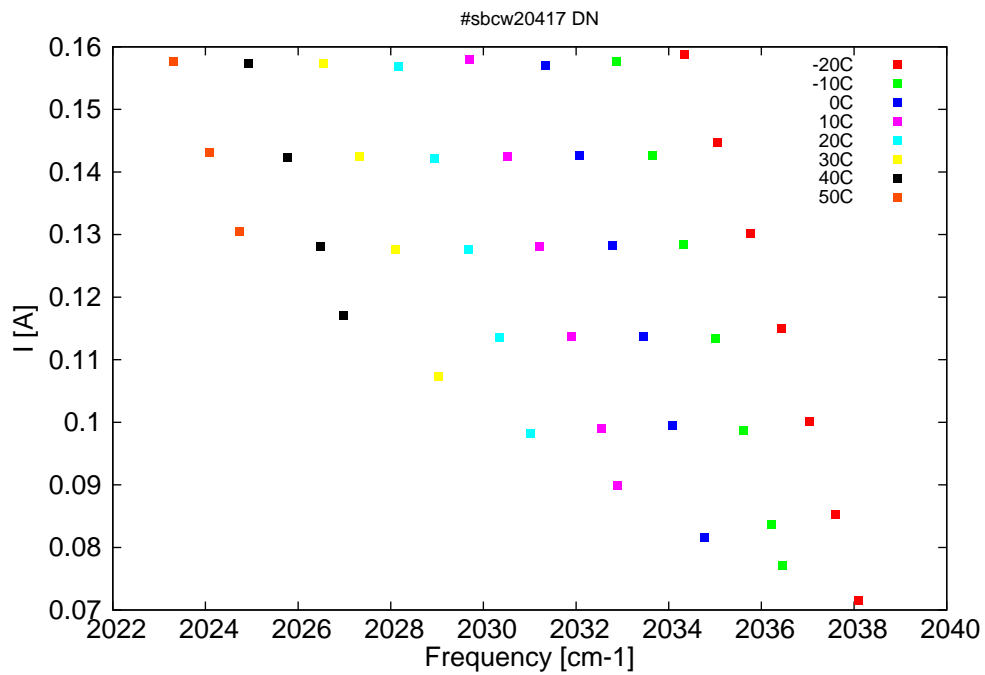


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4906.6	2038.1	2.4	-20	14.63	0.071
4907.7	2037.6	22.2	-20	14.93	0.085
4909.1	2037	40.2	-20	15.24	0.1
4910.6	2036.4	55	-20	15.52	0.115
4912.2	2035.8	67.8	-20	15.79	0.13
4913.9	2035	76.8	-20	16.05	0.145
4915.6	2034.3	83.1	-20	16.28	0.159
4910.5	2036.5	1.2	-10	14.54	0.077
4911.1	2036.2	7.6	-10	14.68	0.084
4912.5	2035.6	25.7	-10	14.99	0.099
4914	2035	41.7	-10	15.26	0.113
4915.6	2034.3	54.1	-10	15.53	0.128
4917.3	2033.6	63.4	-10	15.77	0.143
4919.1	2032.9	70.2	-10	16.01	0.158
4914.6	2034.8	0.8	0	14.45	0.082
4916.2	2034.1	17.7	0	14.78	0.099
4917.7	2033.5	31.2	0	15.05	0.114
4919.3	2032.8	43.3	0	15.3	0.128
4921.1	2032.1	51.5	0	15.53	0.143
4922.9	2031.3	57.8	0	15.76	0.157
4919.1	2032.9	1.1	10	14.41	0.09
4919.9	2032.5	7.5	10	14.57	0.099
4921.5	2031.9	20.8	10	14.83	0.114
4923.1	2031.2	32.4	10	15.07	0.128
4924.9	2030.5	40.2	10	15.29	0.143
4926.9	2029.7	46.3	10	15.53	0.158
4923.7	2031	0.7	20	14.37	0.098
4925.3	2030.4	9.8	20	14.62	0.114
4926.9	2029.7	21.7	20	14.84	0.128
4928.7	2028.9	29.1	20	15.07	0.142
4930.6	2028.2	34.8	20	15.28	0.157
4928.4	2029	0.4	30	14.32	0.107
4930.7	2028.1	12.4	30	14.62	0.128
4932.6	2027.3	19.5	30	14.84	0.143
4934.5	2026.5	24.9	30	15.05	0.157
4933.5	2027	0.5	40	14.28	0.117
4934.6	2026.5	4.9	40	14.42	0.128
4936.4	2025.8	10.9	40	14.61	0.142
4938.4	2024.9	15.9	40	14.81	0.157
4938.9	2024.7	0.5	50	14.27	0.131
4940.5	2024.1	4	50	14.43	0.143
4942.4	2023.3	7.9	50	14.61	0.158

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

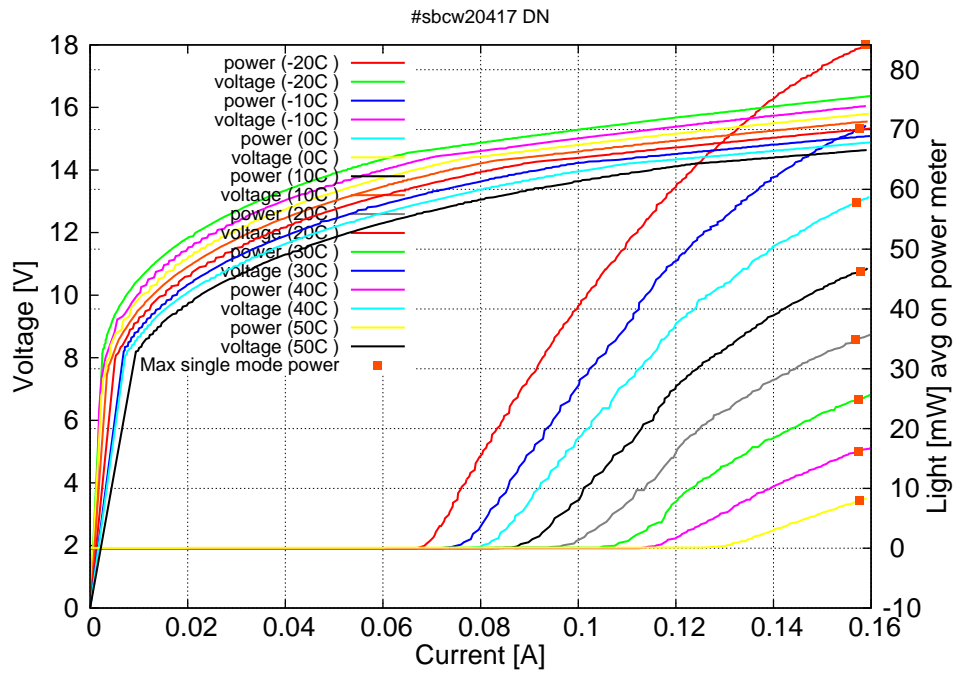


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=14.6V$  (2-wires measurements). Maximum operation current: 0.16A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

