

Datasheet for #sbcw14204 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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.

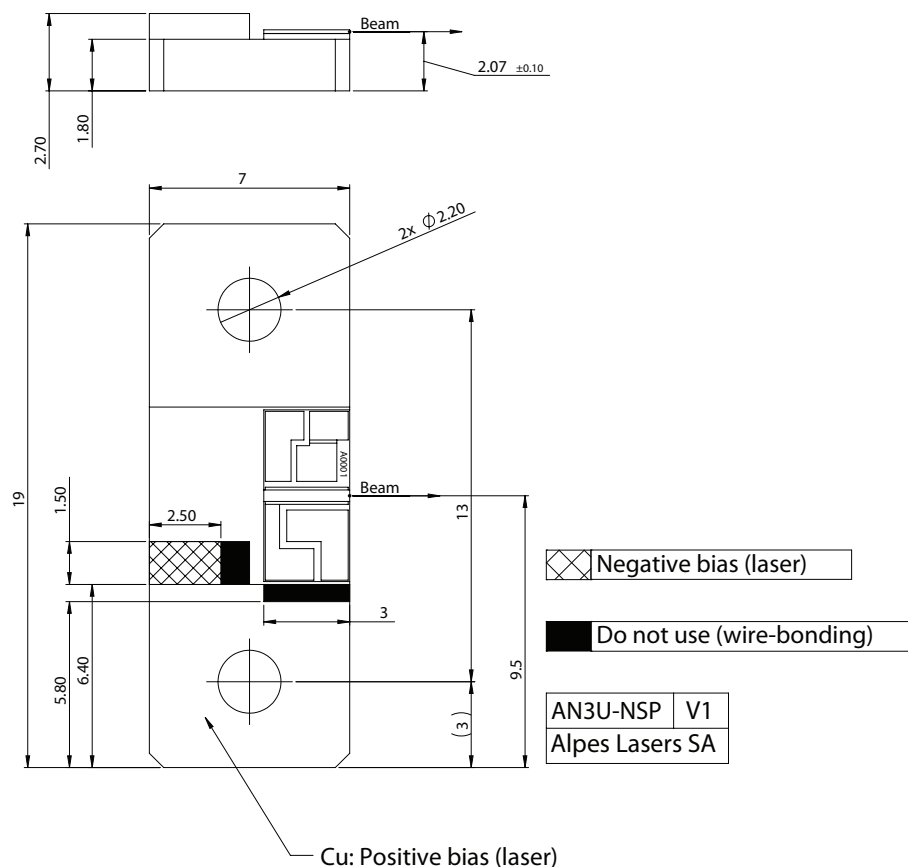


Figure 1: Mechanical and electrical interface for #sbcw14204 DN

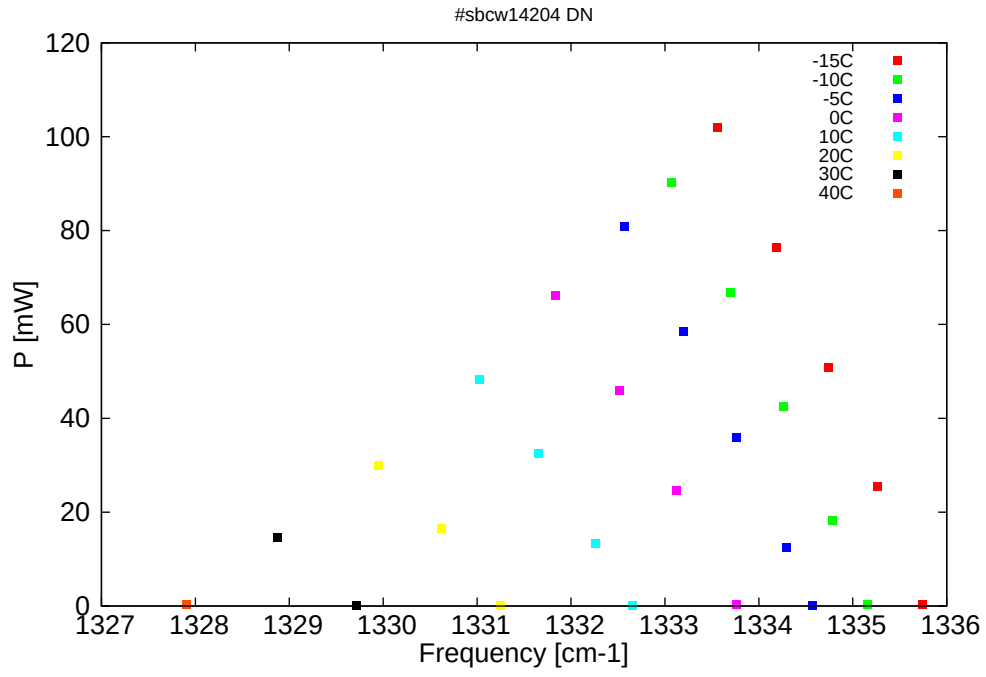


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

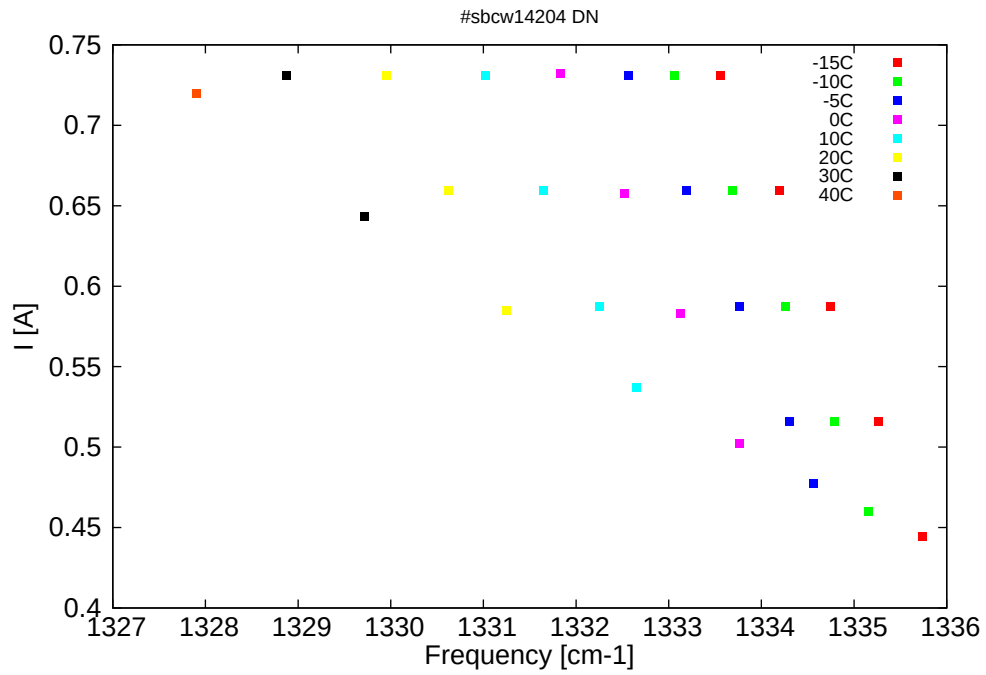


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
7486.5	1335.7	0.4	-15	8.1	0.444
7489.2	1335.3	25.4	-15	8.29	0.516
7492.1	1334.7	50.8	-15	8.47	0.588
7495.2	1334.2	76.5	-15	8.67	0.659
7498.7	1333.6	102.1	-15	8.86	0.731
7489.7	1335.2	0.2	-10	8.11	0.46
7491.8	1334.8	18.2	-10	8.26	0.516
7494.8	1334.3	42.5	-10	8.44	0.588
7498	1333.7	66.7	-10	8.64	0.659
7501.5	1333.1	90.2	-10	8.83	0.731
7493.1	1334.6	0.2	-5	8.12	0.477
7494.6	1334.3	12.5	-5	8.23	0.516
7497.6	1333.8	35.9	-5	8.42	0.588
7500.8	1333.2	58.5	-5	8.61	0.659
7504.3	1332.6	80.9	-5	8.8	0.731
7497.6	1333.8	0.3	0	8.15	0.502
7501.2	1333.1	24.7	0	8.37	0.583
7504.6	1332.5	46	0	8.56	0.658
7508.5	1331.8	66.3	0	8.76	0.732
7503.8	1332.7	0.1	10	8.2	0.537
7506.1	1332.3	13.4	10	8.34	0.588
7509.5	1331.7	32.4	10	8.53	0.659
7513	1331	48.2	10	8.72	0.731
7511.7	1331.3	0.1	20	8.29	0.585
7515.3	1330.6	16.6	20	8.49	0.659
7519.1	1330	29.9	20	8.69	0.731
7520.4	1329.7	0.1	30	8.41	0.643
7525.1	1328.9	14.5	30	8.65	0.731
7530.6	1327.9	0.3	40	8.59	0.72

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

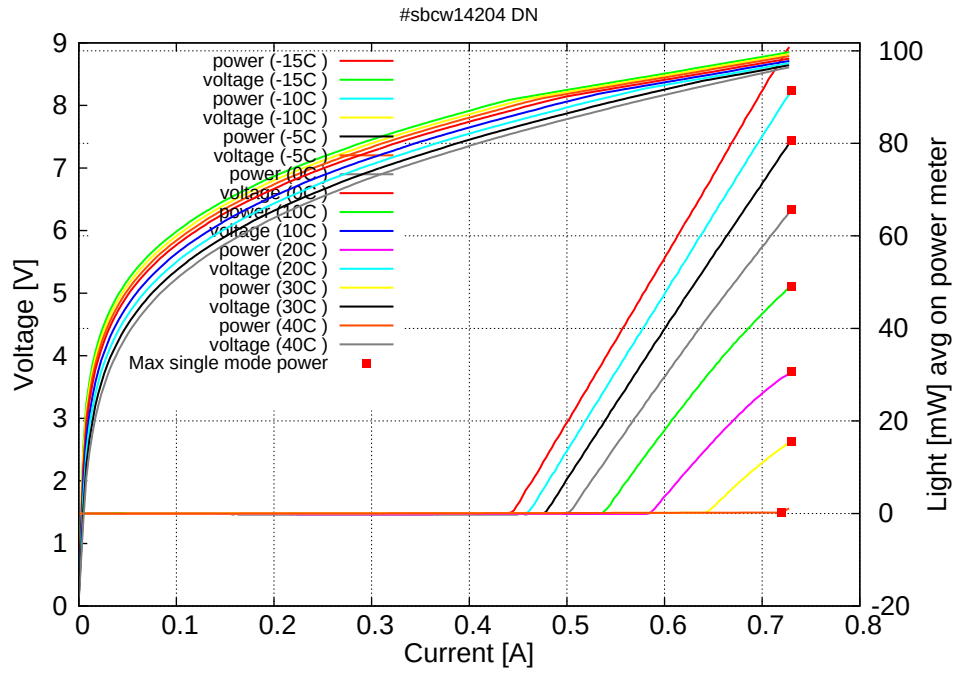


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.43A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.73A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

