

Datasheet for #sbcw15525 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.

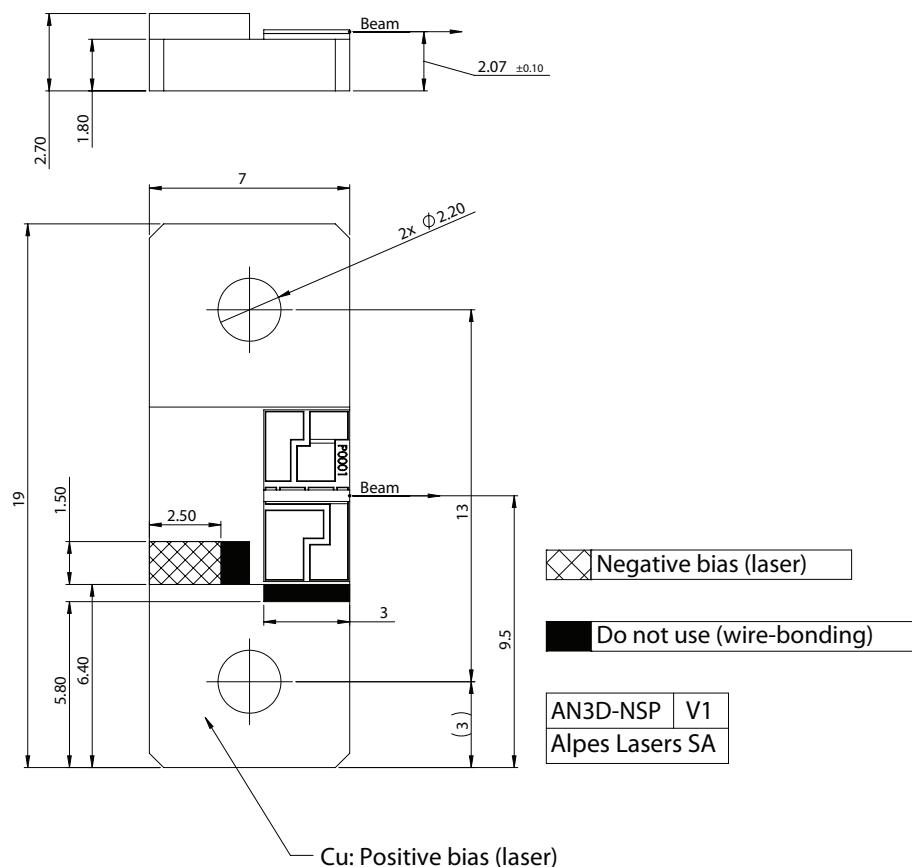


Figure 1: Mechanical and electrical interface for #sbcw15525 DN

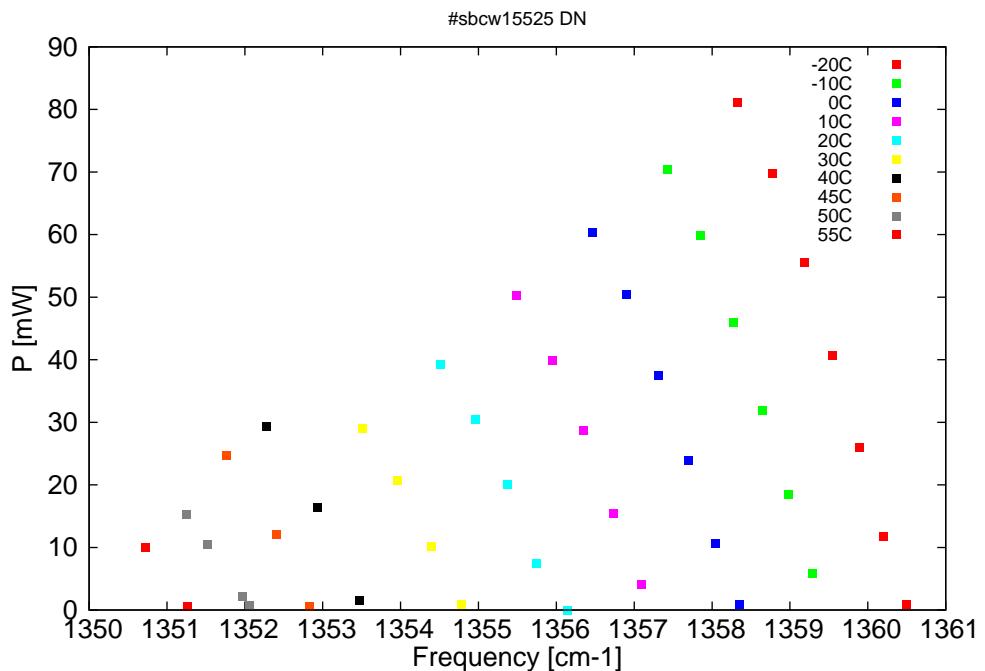


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

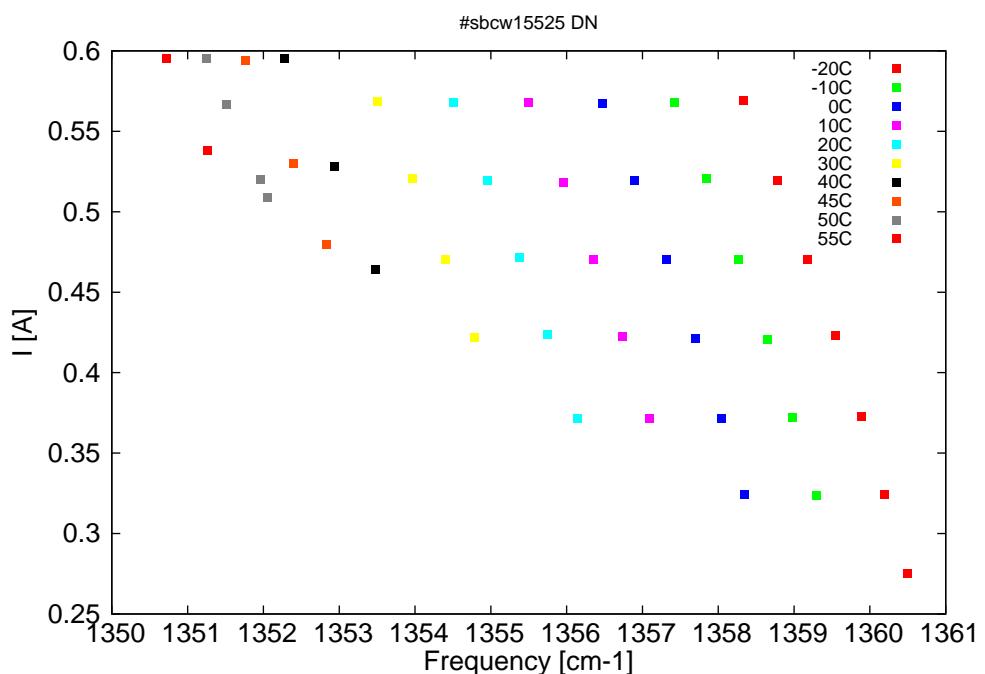


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7350.3	1360.5	0.8	-20	8.36	0.275
7351.9	1360.2	11.7	-20	8.6	0.324
7353.5	1359.9	26	-20	8.83	0.373
7355.4	1359.5	40.7	-20	9.06	0.423
7357.4	1359.2	55.6	-20	9.28	0.471
7359.5	1358.8	69.8	-20	9.52	0.52
7362	1358.3	81.1	-20	9.77	0.569
7356.8	1359.3	5.9	-10	8.54	0.323
7358.5	1359	18.5	-10	8.77	0.372
7360.3	1358.6	31.9	-10	8.99	0.421
7362.3	1358.3	46	-10	9.22	0.47
7364.6	1357.8	59.9	-10	9.47	0.521
7366.9	1357.4	70.5	-10	9.71	0.568
7361.9	1358.3	0.8	0	8.48	0.324
7363.5	1358	10.7	0	8.71	0.372
7365.4	1357.7	24	0	8.94	0.421
7367.5	1357.3	37.5	0	9.17	0.47
7369.7	1356.9	50.4	0	9.41	0.52
7372.1	1356.5	60.3	0	9.65	0.567
7368.7	1357.1	4.2	10	8.66	0.372
7370.6	1356.7	15.5	10	8.89	0.423
7372.7	1356.4	28.6	10	9.12	0.471
7374.9	1356	39.9	10	9.35	0.518
7377.4	1355.5	50.3	10	9.59	0.568
7373.8	1356.1	0	20	8.6	0.371
7376	1355.7	7.5	20	8.85	0.424
7378	1355.4	20.1	20	9.07	0.471
7380.3	1355	30.4	20	9.3	0.52
7382.7	1354.5	39.2	20	9.54	0.568
7381.3	1354.8	0.9	30	8.79	0.422
7383.3	1354.4	10.2	30	9.02	0.47
7385.7	1354	20.8	30	9.26	0.521
7388.2	1353.5	29	30	9.49	0.569
7388.4	1353.5	1.4	40	8.94	0.464
7391.3	1352.9	16.4	40	9.24	0.528
7395	1352.3	29.4	40	9.56	0.595
7391.9	1352.8	0.5	45	8.98	0.479
7394.3	1352.4	12.1	45	9.22	0.53
7397.7	1351.8	24.6	45	9.53	0.594
7396.1	1352.1	0.7	50	9.1	0.509
7396.6	1352	2.2	50	9.15	0.52
7399.1	1351.5	10.5	50	9.38	0.567
7400.6	1351.2	15.3	50	9.5	0.595
7400.5	1351.3	0.6	55	9.21	0.538
7403.5	1350.7	10	55	9.48	0.595

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

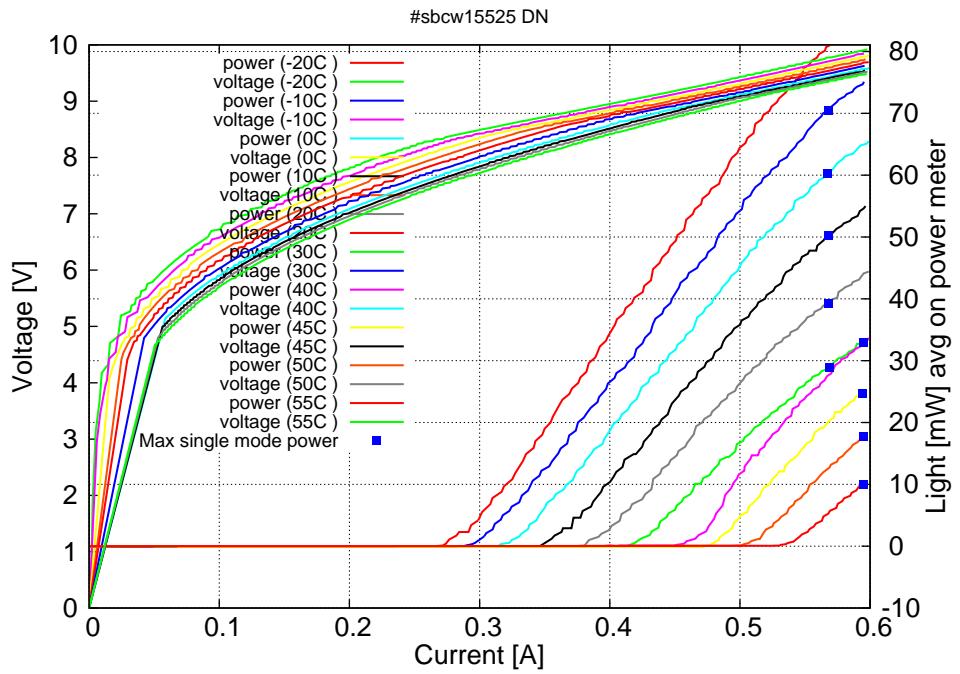


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.27A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.57A between -20C and 10C, 0.60A between 20C and 55C.

Figure 3: spectra at different temperatures for various DC currents

