

Datasheet for #sbcw19552 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 #sbcw19552 DN (please note that AlN submount numbering is A0PJ0)

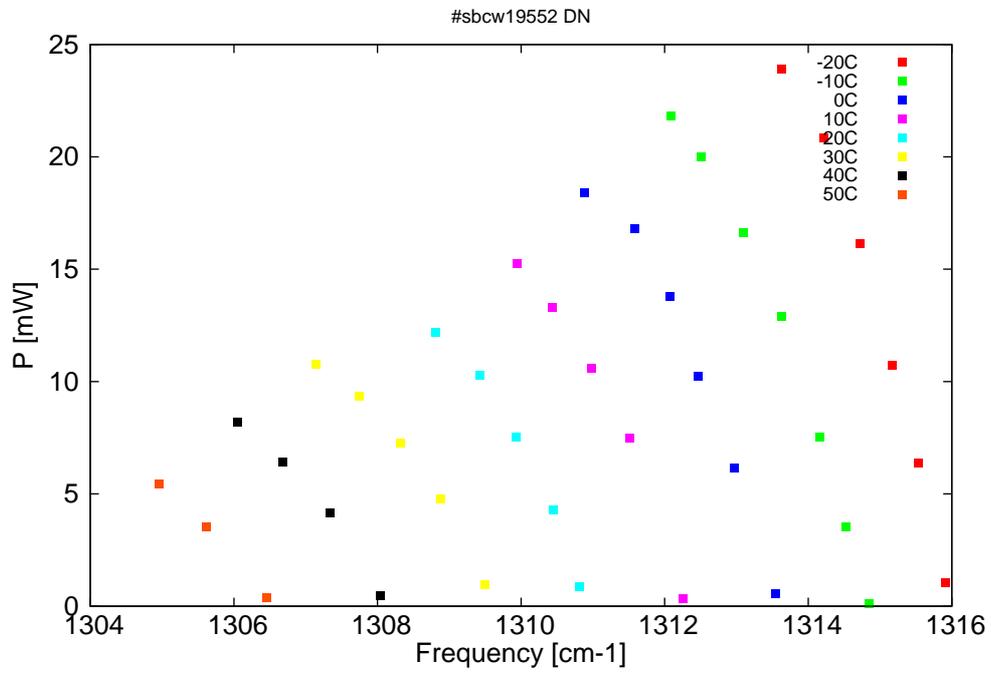


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

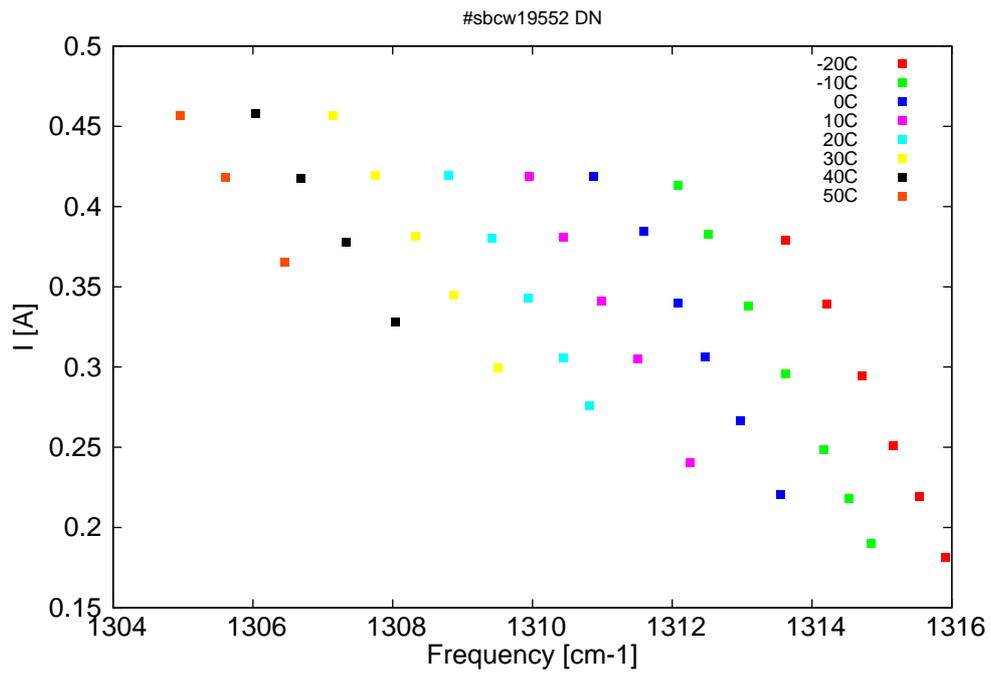


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7599.3	1315.9	1.1	-20	7.87	0.181
7601.4	1315.5	6.4	-20	8.19	0.219
7603.6	1315.2	10.7	-20	8.49	0.251
7606.2	1314.7	16.1	-20	8.81	0.294
7609.1	1314.2	20.8	-20	9.16	0.339
7612.5	1313.6	23.9	-20	9.46	0.379
7605.5	1314.8	0.1	-10	7.99	0.19
7607.3	1314.5	3.5	-10	8.22	0.218
7609.4	1314.2	7.5	-10	8.51	0.248
7612.5	1313.6	12.9	-10	8.82	0.296
7615.6	1313.1	16.6	-10	9.09	0.338
7619	1312.5	20	-10	9.37	0.383
7621.4	1312.1	21.8	-10	9.58	0.413
7613	1313.5	0.6	0	8.12	0.22
7616.3	1313	6.1	0	8.44	0.267
7619.2	1312.5	10.2	0	8.72	0.307
7621.5	1312.1	13.8	0	8.94	0.34
7624.3	1311.6	16.8	0	9.28	0.385
7628.5	1310.9	18.4	0	9.57	0.419
7620.5	1312.3	0.3	10	8.14	0.241
7624.8	1311.5	7.5	10	8.57	0.305
7627.8	1311	10.6	10	8.84	0.341
7631	1310.4	13.3	10	9.08	0.381
7633.9	1309.9	15.2	10	9.35	0.419
7628.9	1310.8	0.9	20	8.26	0.276
7631	1310.4	4.3	20	8.45	0.306
7634	1309.9	7.5	20	8.69	0.343
7636.9	1309.4	10.3	20	8.94	0.38
7640.6	1308.8	12.2	20	9.19	0.42
7636.5	1309.5	1	30	8.31	0.3
7640.1	1308.9	4.8	30	8.61	0.345
7643.4	1308.3	7.3	30	8.85	0.381
7646.8	1307.7	9.4	30	9.09	0.42
7650.3	1307.1	10.8	30	9.33	0.457
7645	1308	0.5	40	8.42	0.328
7649.2	1307.3	4.1	40	8.73	0.378
7652.9	1306.7	6.4	40	8.98	0.418
7656.7	1306	8.2	40	9.22	0.458
7654.3	1306.5	0.4	50	8.57	0.365
7659.2	1305.6	3.5	50	8.9	0.418
7663.1	1305	5.4	50	9.14	0.457

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

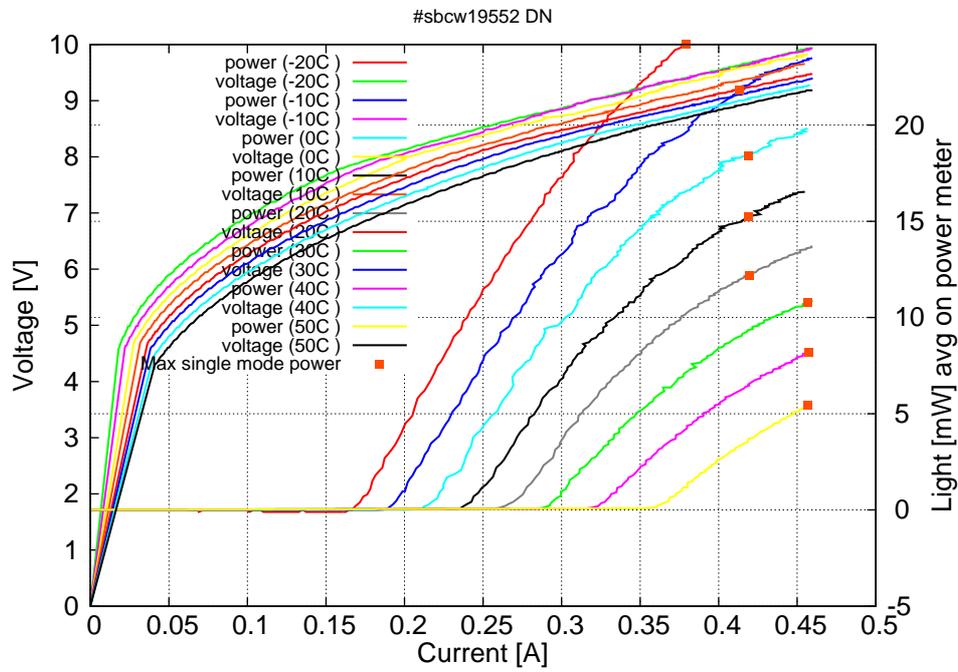


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=7.9V$ (2-wires measurements). Maximum operation current: 0.41A between -20C and -10C, 0.42A between 0C and 20C, 0.46A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

