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Datasheet for #sbcw12576 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.

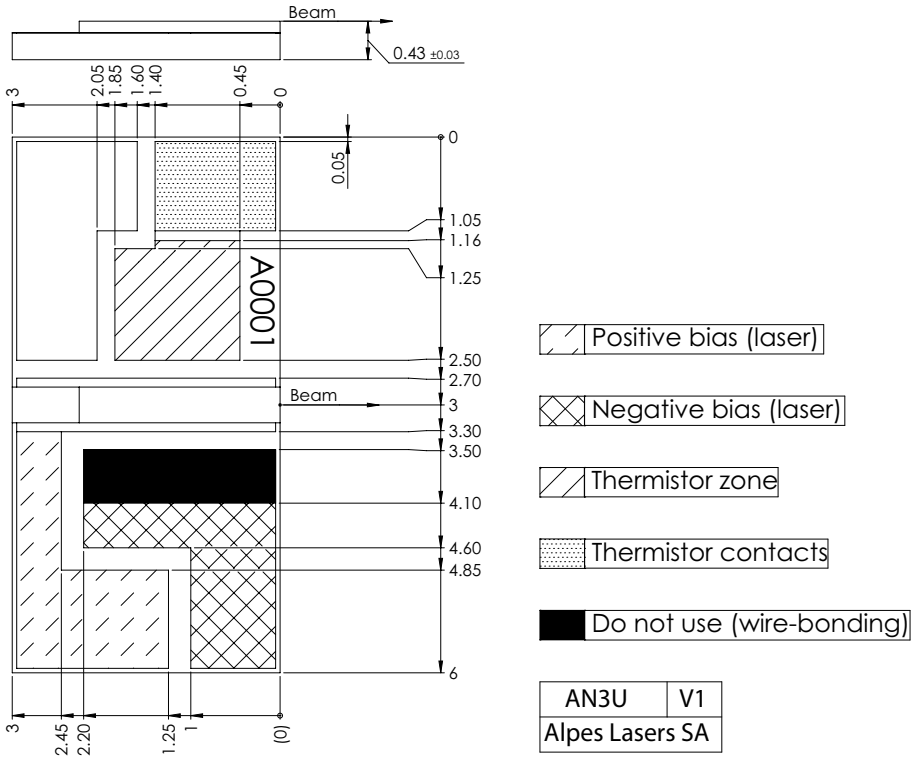

Figure 1: Mechanical and electrical interface for #sbcw12576 DN (please note that AlN submount numbering is A05KZ)

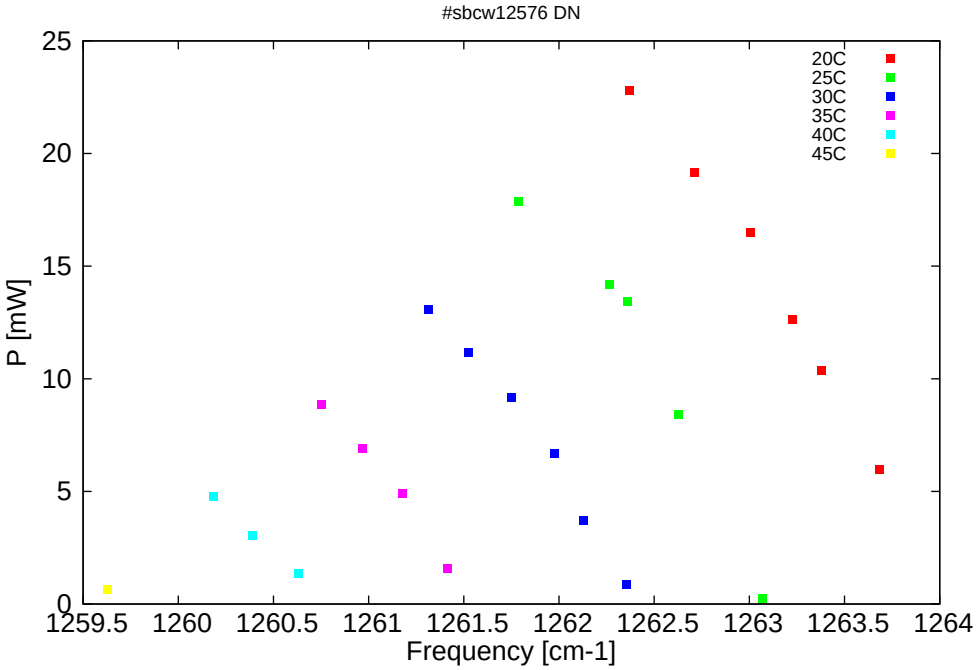

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

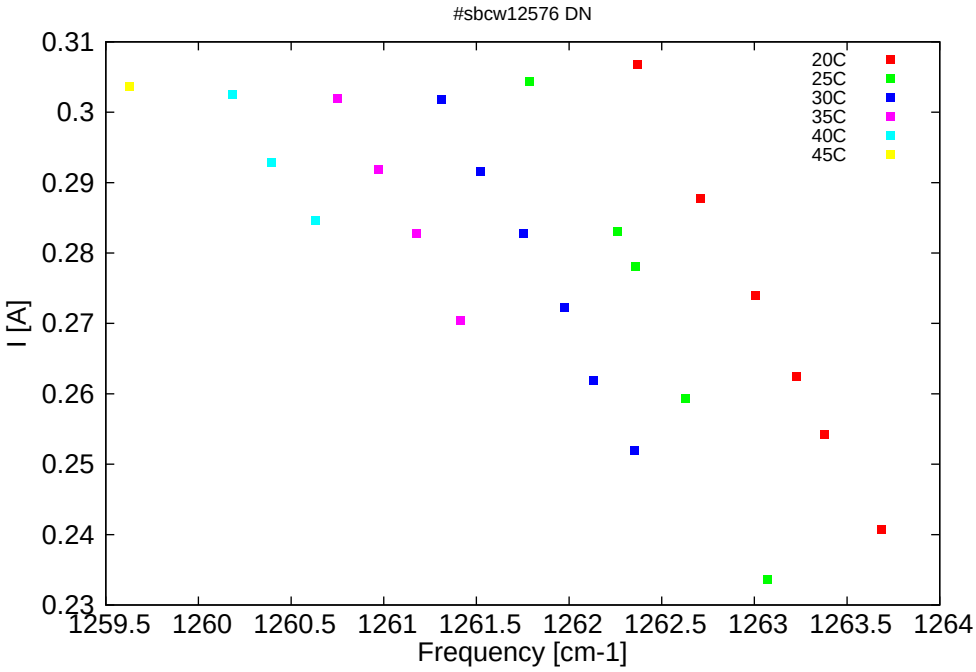

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7913.4	1263.7	6	20	8.42	0.241
7915.3	1263.4	10.4	20	8.59	0.254
7916.2	1263.2	12.6	20	8.66	0.262
7917.6	1263	16.5	20	8.74	0.274
7919.5	1262.7	19.2	20	8.87	0.288
7921.6	1262.4	22.8	20	9.02	0.307
7917.2	1263.1	0.3	25	8.46	0.234
7920	1262.6	8.4	25	8.67	0.259
7921.7	1262.4	13.4	25	8.77	0.278
7922.3	1262.3	14.2	25	8.8	0.283
7925.3	1261.8	17.8	25	8.99	0.304
7921.7	1262.4	0.9	30	8.52	0.252
7923.1	1262.1	3.7	30	8.61	0.262
7924.1	1262	6.7	30	8.68	0.272
7925.5	1261.8	9.1	30	8.77	0.283
7926.9	1261.5	11.2	30	8.86	0.292
7928.2	1261.3	13.1	30	8.94	0.302
7927.6	1261.4	1.6	35	8.66	0.27
7929.1	1261.2	4.9	35	8.76	0.283
7930.4	1261	6.9	35	8.84	0.292
7931.8	1260.8	8.9	35	8.92	0.302
7932.5	1260.6	1.4	40	8.74	0.285
7934	1260.4	3	40	8.83	0.293
7935.4	1260.2	4.8	40	8.9	0.303
7938.9	1259.6	0.6	45	8.88	0.304

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

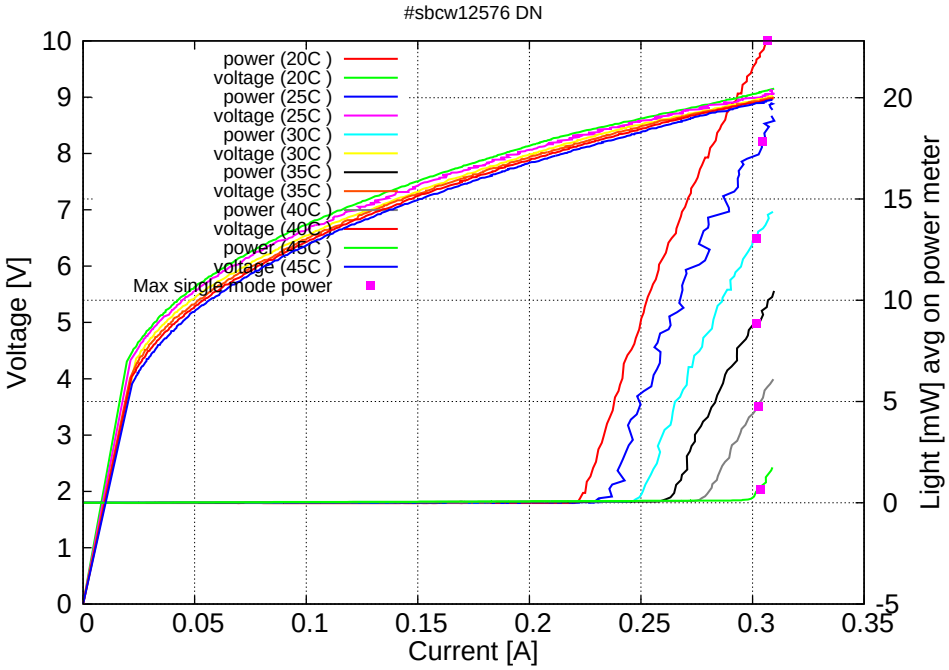

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 20C: Ith=0.22A / Vth=8.4V (2-wires measurements). Maximum operation current: 0.31A for all temperatures.

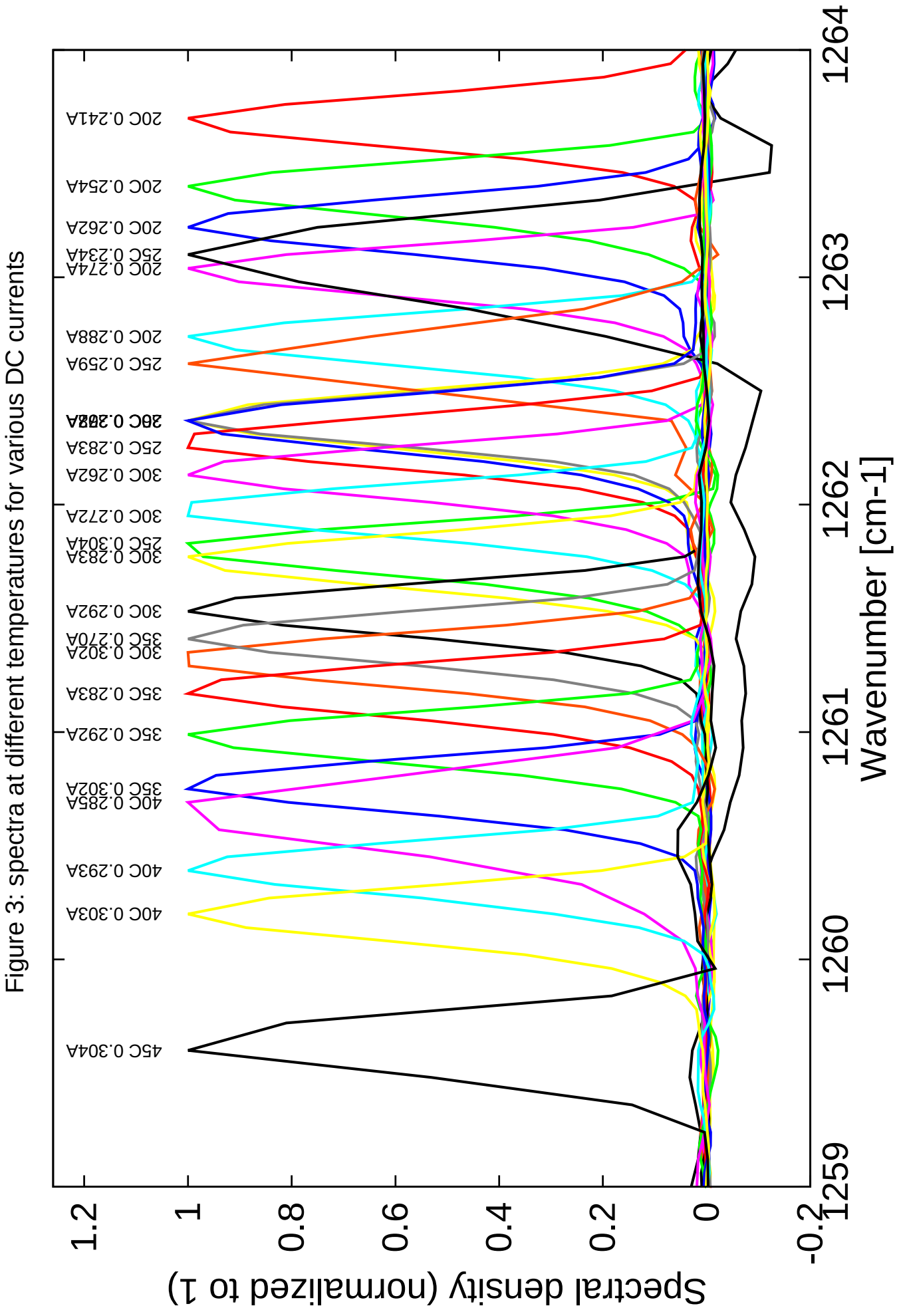

Figure 3: spectra at different temperatures for various DC currents