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Datasheet for #sbcw14546 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.

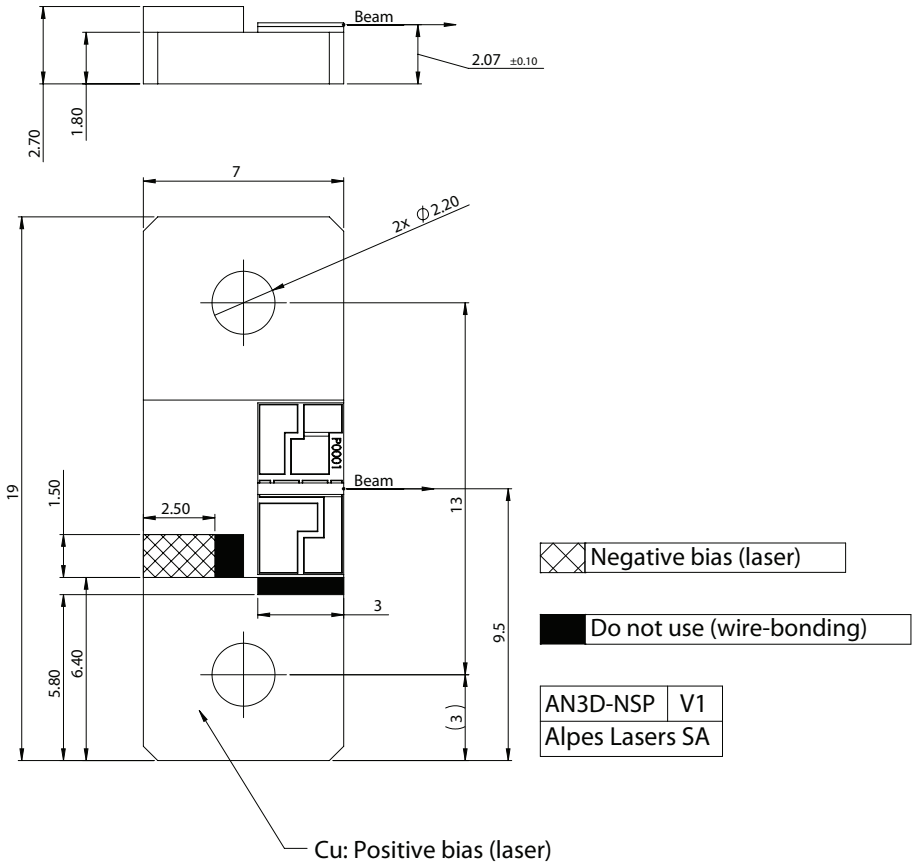

Figure 1: Mechanical and electrical interface for #sbcw14546 DN

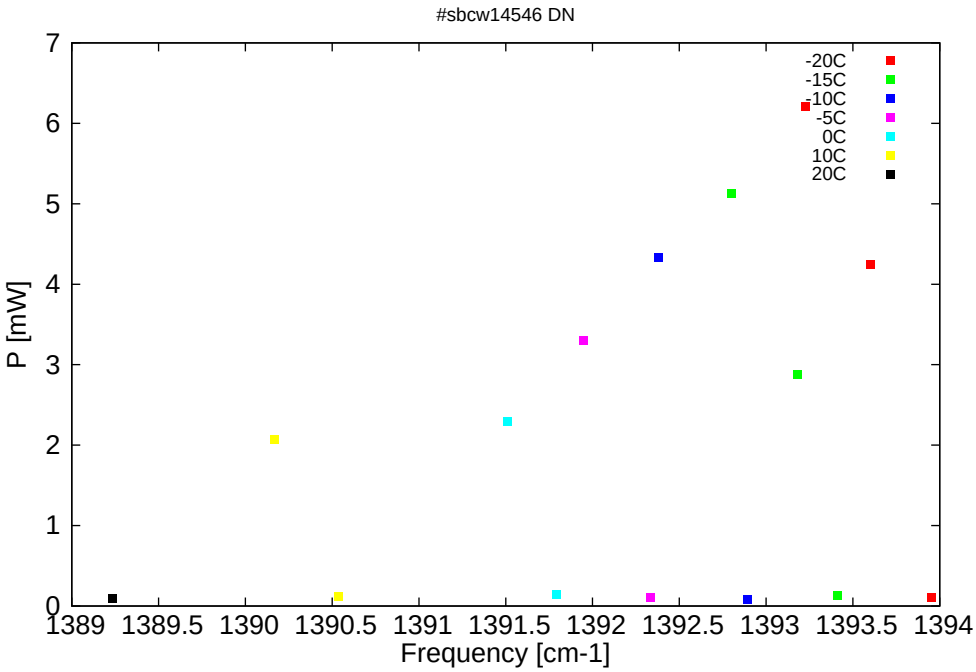

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

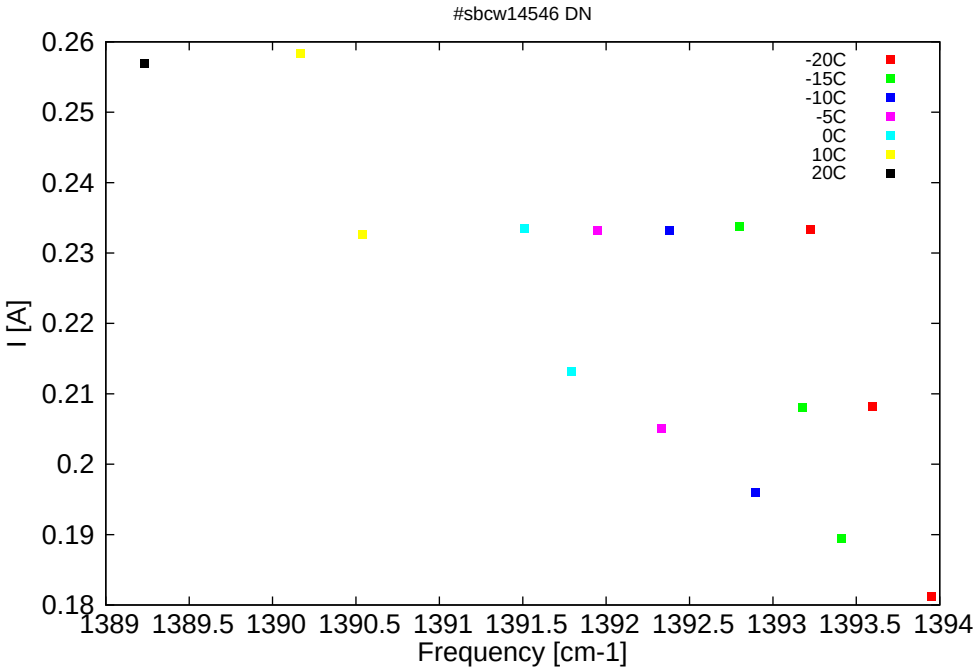

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7173.9	1394	0.1	-20	13.42	0.181
7175.7	1393.6	4.2	-20	13.88	0.208
7177.6	1393.2	6.2	-20	14.34	0.233
7176.6	1393.4	0.1	-15	13.39	0.189
7177.8	1393.2	2.9	-15	13.7	0.208
7179.8	1392.8	5.1	-15	14.15	0.234
7179.3	1392.9	0.1	-10	13.34	0.196
7182	1392.4	4.3	-10	13.97	0.233
7182.2	1392.3	0.1	-5	13.33	0.205
7184.2	1391.9	3.3	-5	13.79	0.233
7185	1391.8	0.1	0	13.3	0.213
7186.4	1391.5	2.3	0	13.63	0.233
7191.5	1390.5	0.1	10	13.25	0.233
7193.4	1390.2	2.1	10	13.63	0.258
7198.2	1389.2	0.1	20	13.29	0.257

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

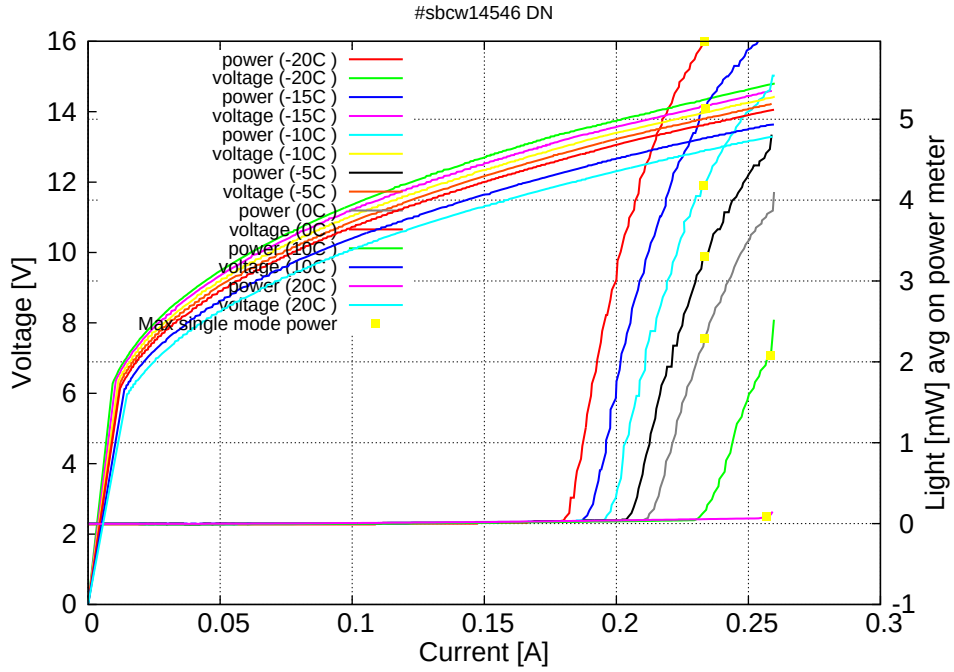

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.18A / Vth=13.4V (2-wires measurements). Maximum operation current: 0.24A between -20C and 0C, 0.26A between 10C and 20C.

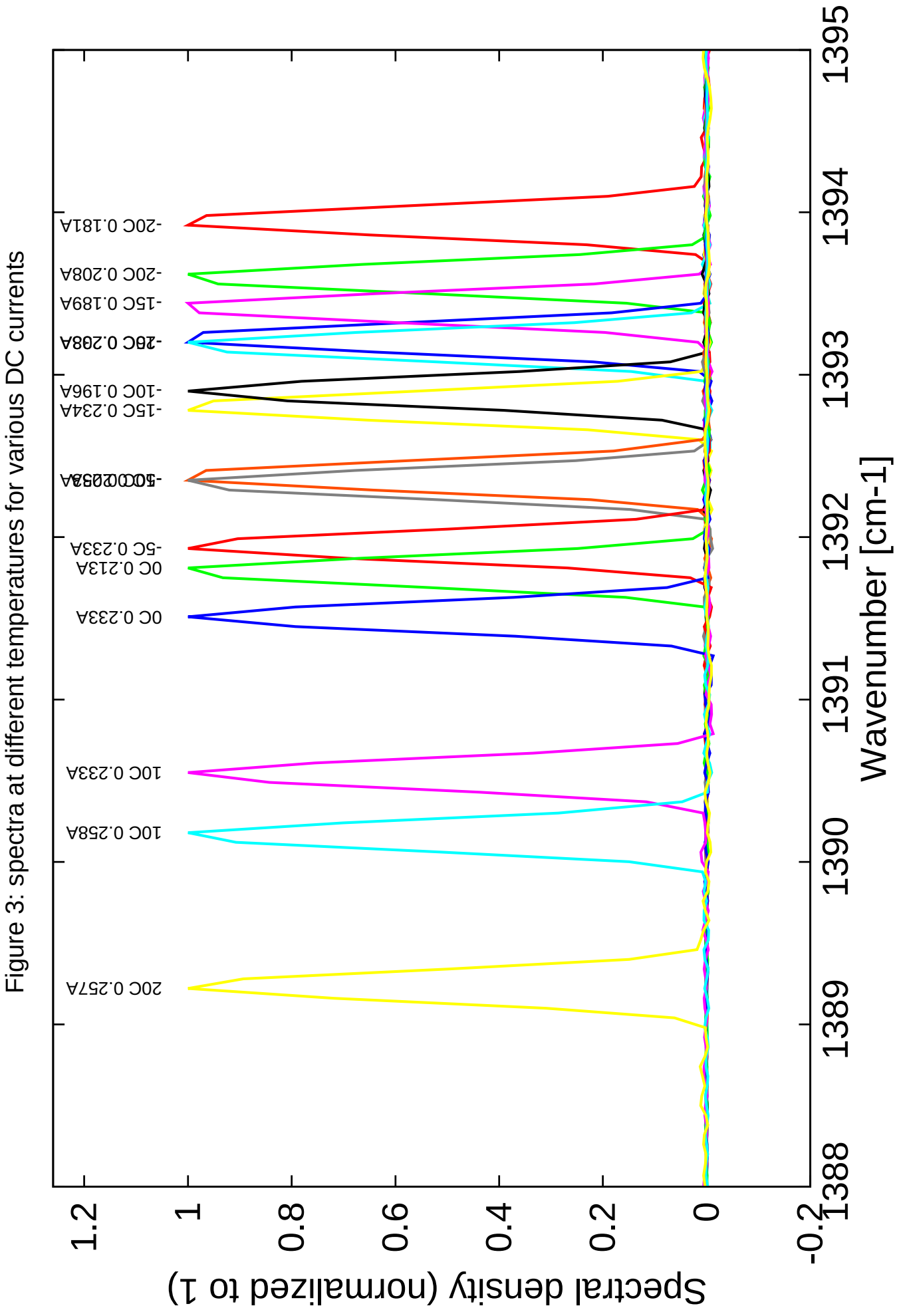

Figure 3: spectra at different temperatures for various DC currents