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Datasheet for #sbcw21159 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.

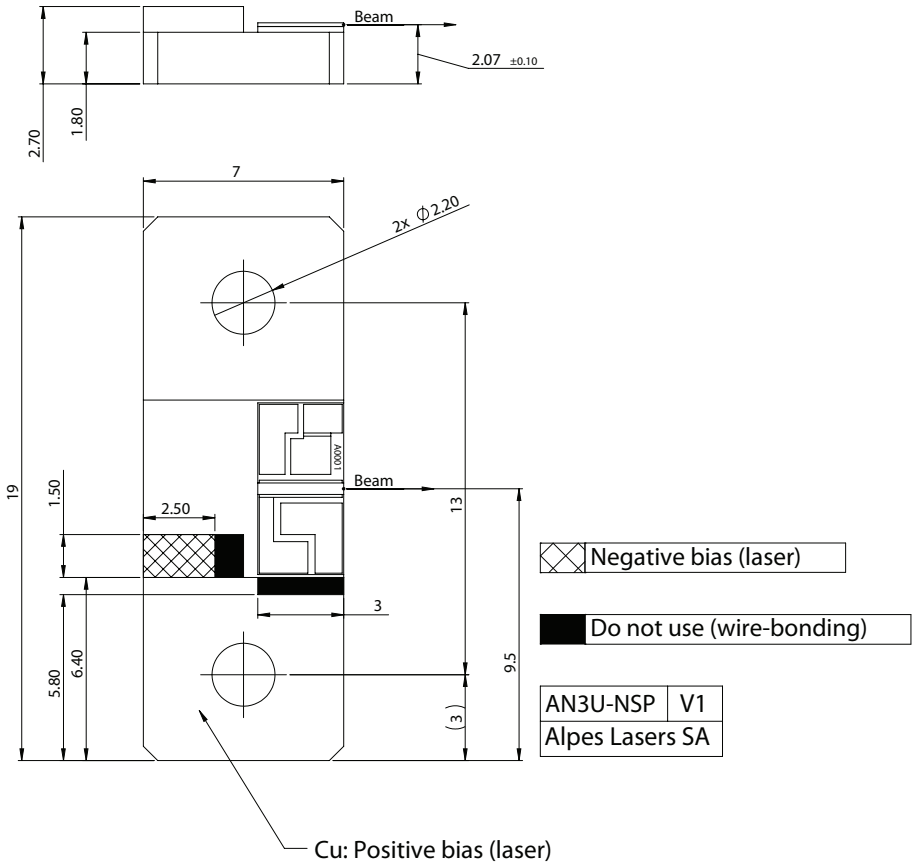

Figure 1: Mechanical and electrical interface for #sbcw21159 DN

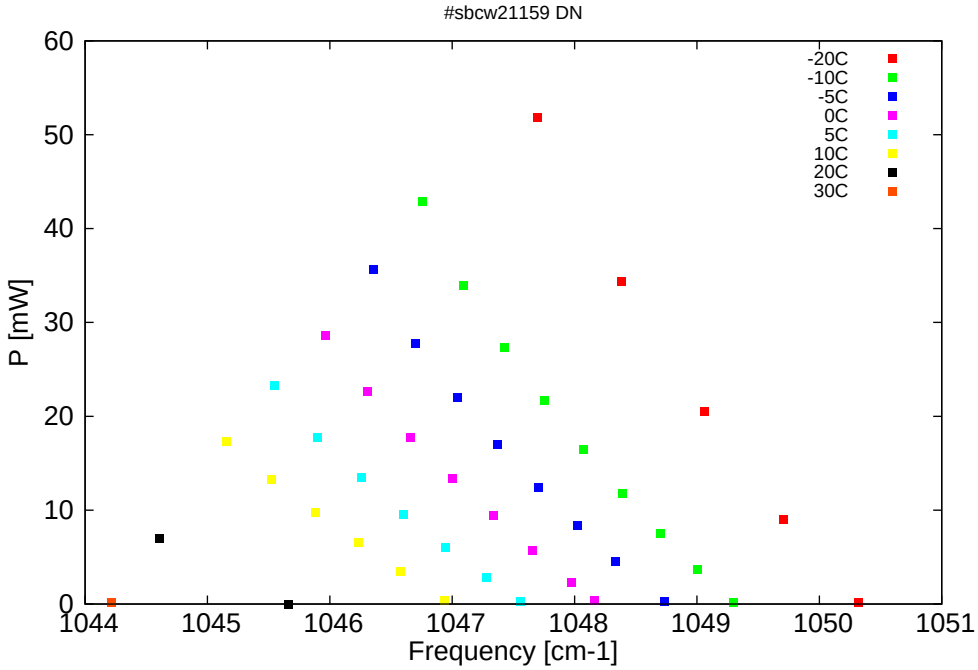

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

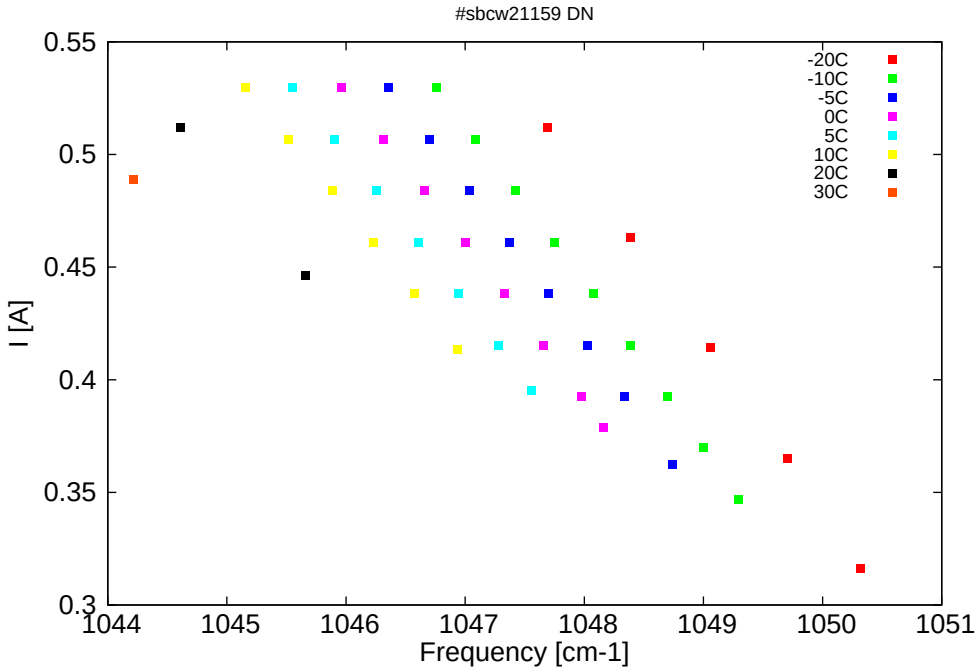

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
9520.9	1050.3	0.2	-20	8.99	0.316
9526.5	1049.7	9	-20	9.29	0.365
9532.4	1049.1	20.5	-20	9.56	0.414
9538.5	1048.4	34.4	-20	9.83	0.463
9544.8	1047.7	51.8	-20	10.09	0.512
9530.2	1049.3	0.2	-10	9.08	0.347
9532.9	1049	3.6	-10	9.22	0.37
9535.6	1048.7	7.5	-10	9.36	0.393
9538.4	1048.4	11.8	-10	9.49	0.415
9541.3	1048.1	16.5	-10	9.62	0.438
9544.2	1047.8	21.7	-10	9.74	0.461
9547.2	1047.4	27.3	-10	9.87	0.484
9550.3	1047.1	33.9	-10	10	0.507
9553.3	1046.8	42.9	-10	10.12	0.53
9535.3	1048.7	0.2	-5	9.12	0.363
9538.9	1048.3	4.5	-5	9.31	0.393
9541.8	1048	8.3	-5	9.45	0.415
9544.7	1047.7	12.4	-5	9.58	0.438
9547.7	1047.4	17	-5	9.71	0.461
9550.7	1047	22	-5	9.83	0.484
9553.8	1046.7	27.8	-5	9.97	0.507
9557	1046.4	35.6	-5	10.09	0.53
9540.5	1048.2	0.3	0	9.17	0.379
9542.2	1048	2.2	0	9.26	0.393
9545.1	1047.7	5.7	0	9.4	0.415
9548.1	1047.3	9.4	0	9.54	0.438
9551.1	1047	13.4	0	9.67	0.461
9554.2	1046.7	17.8	0	9.8	0.484
9557.4	1046.3	22.7	0	9.93	0.507
9560.6	1046	28.6	0	10.07	0.53
9546	1047.6	0.3	5	9.23	0.395
9548.6	1047.3	2.8	5	9.36	0.415
9551.6	1046.9	6	5	9.5	0.438
9554.7	1046.6	9.6	5	9.63	0.461
9557.9	1046.3	13.5	5	9.77	0.484
9561.1	1045.9	17.7	5	9.9	0.507
9564.4	1045.5	23.2	5	10.04	0.53
9551.7	1046.9	0.3	10	9.3	0.413
9555	1046.6	3.4	10	9.46	0.438
9558.1	1046.2	6.5	10	9.6	0.461
9561.3	1045.9	9.8	10	9.73	0.484
9564.6	1045.5	13.2	10	9.87	0.507
9568	1045.2	17.3	10	10.01	0.53
9563.3	1045.7	0	20	9.43	0.446
9573	1044.6	7	20	9.85	0.512
9576.5	1044.2	0.2	30	9.63	0.489

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

#sbcw21159 DN

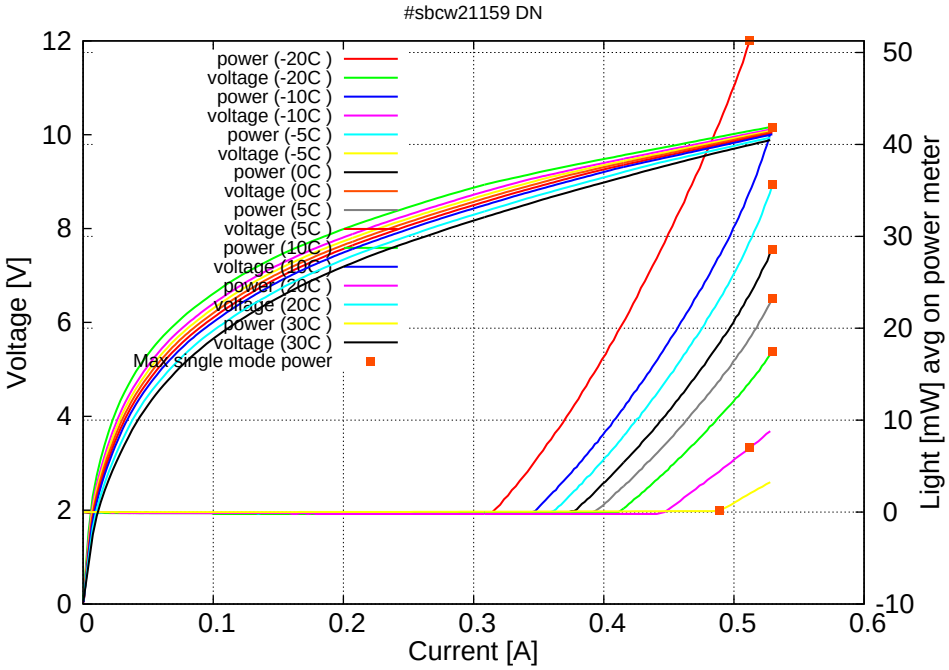

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.31A / Vth=9.0V (2-wires measurements). Maximum operation current: 0.53A for all temperatures.

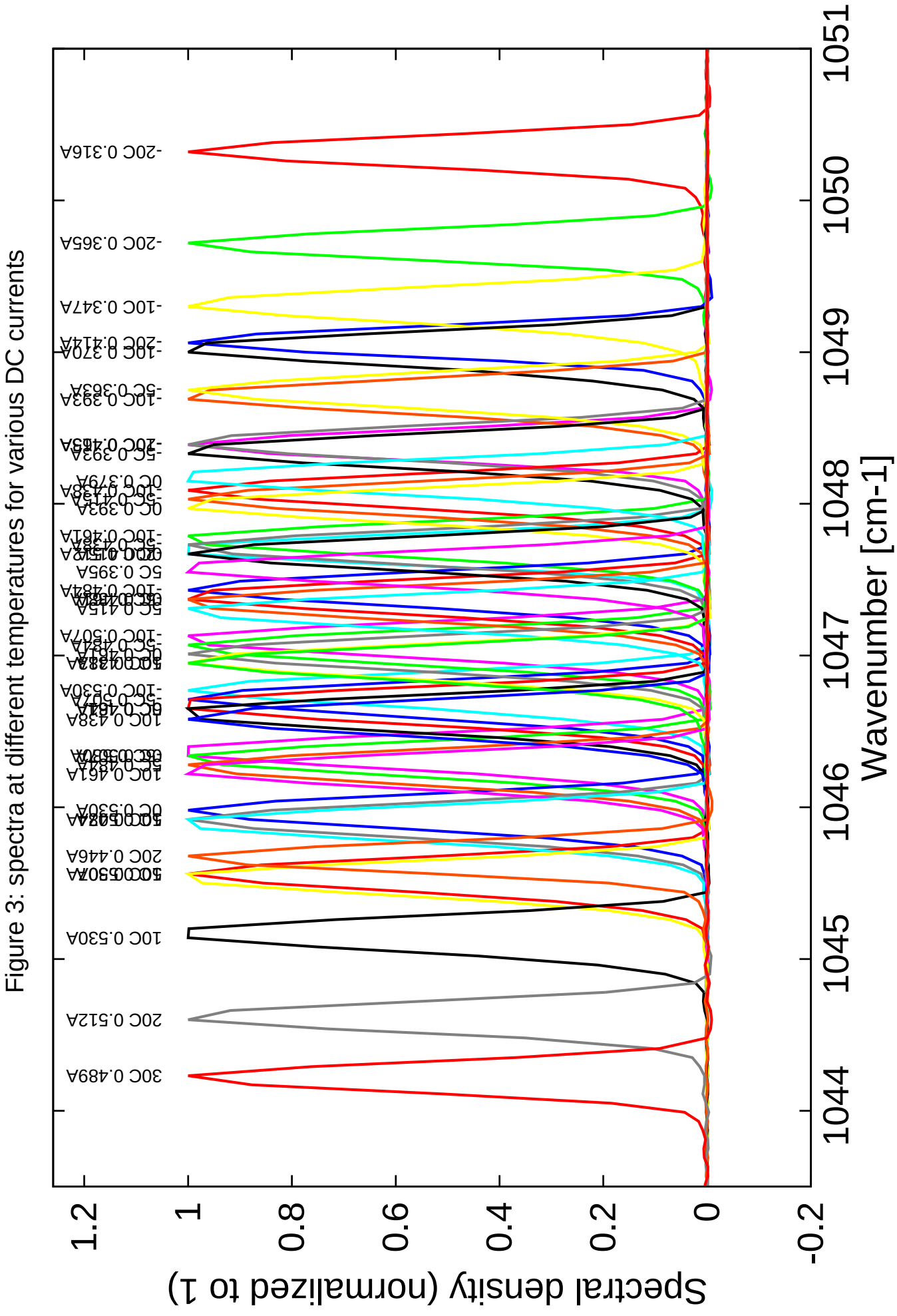

Figure 3: spectra at different temperatures for various DC currents