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Datasheet for #sbcw2405 UP

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.

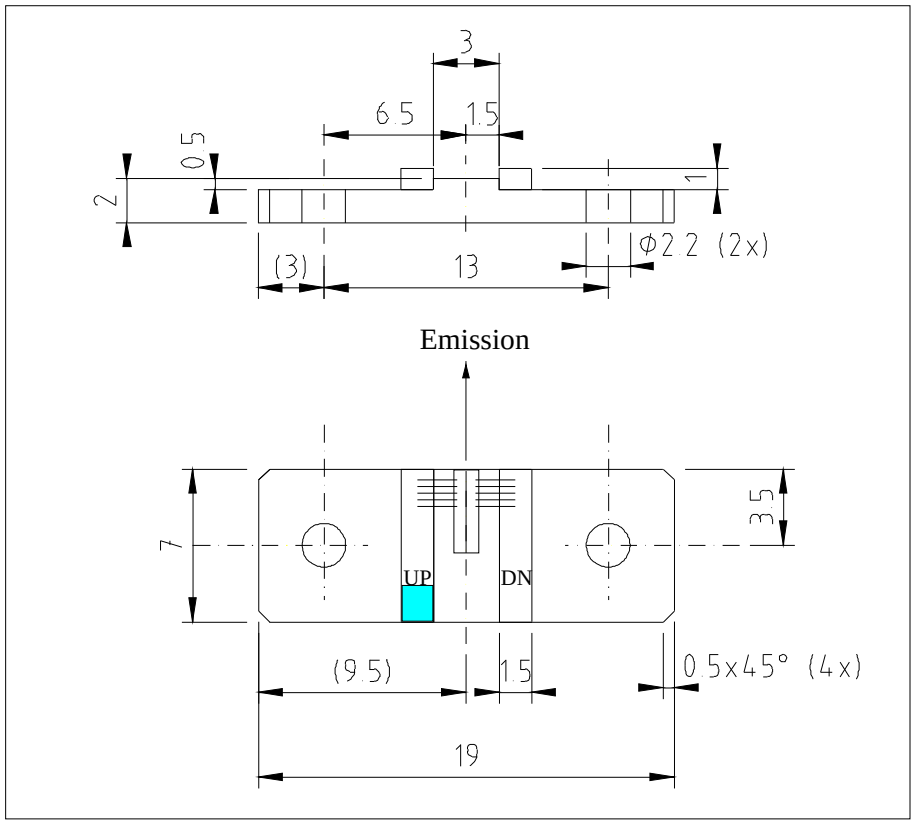

Figure 1: Mechanical and electrical interface for #sbcw2405 UP (please note that the laser is connected to the UP pad drawn in blue)

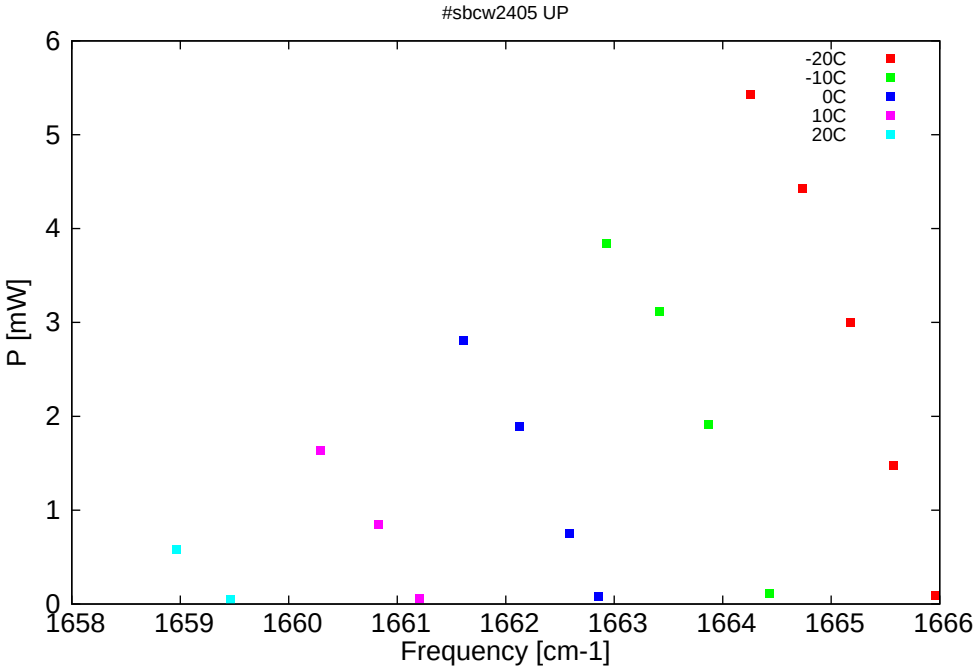

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

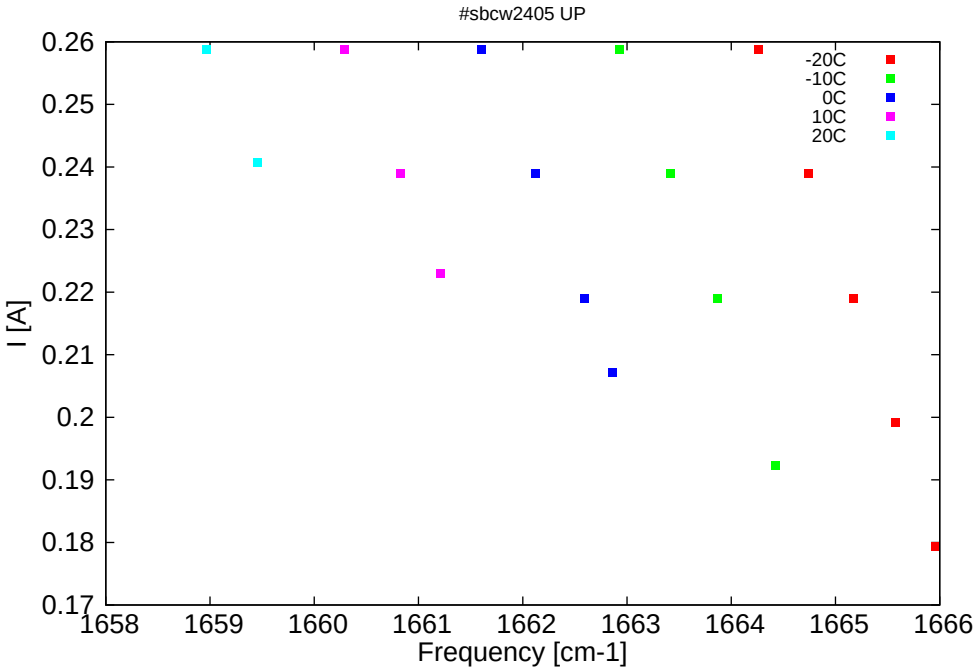

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
6002.5	1666	0.1	-20	7.34	0.179
6003.9	1665.6	1.5	-20	7.5	0.199
6005.4	1665.2	3	-20	7.66	0.219
6006.9	1664.7	4.4	-20	7.84	0.239
6008.7	1664.3	5.4	-20	8.07	0.259
6008.1	1664.4	0.1	-10	7.39	0.192
6010.1	1663.9	1.9	-10	7.62	0.219
6011.7	1663.4	3.1	-10	7.81	0.239
6013.5	1662.9	3.8	-10	8.04	0.259
6013.7	1662.9	0.1	0	7.47	0.207
6014.7	1662.6	0.8	0	7.58	0.219
6016.4	1662.1	1.9	0	7.78	0.239
6018.3	1661.6	2.8	0	8.02	0.259
6019.7	1661.2	0.1	10	7.59	0.223
6021.1	1660.8	0.8	10	7.75	0.239
6023	1660.3	1.6	10	7.99	0.259
6026.1	1659.5	0.1	20	7.75	0.241
6027.8	1659	0.6	20	7.98	0.259

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

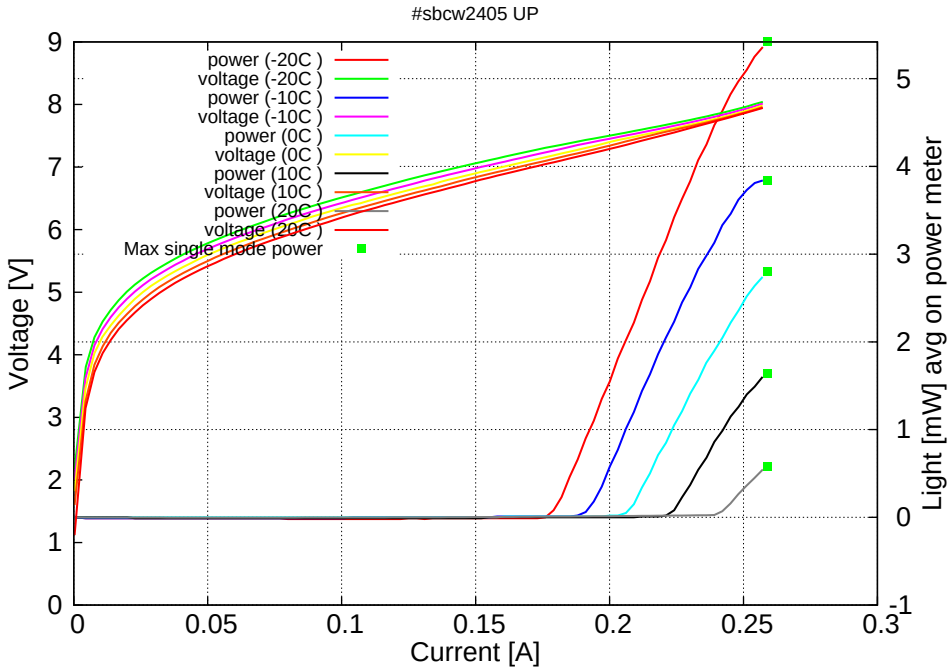

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.18A / Vth=7.3V (2-wires measurements). Maximum operation current: 0.26A for all temperatures.

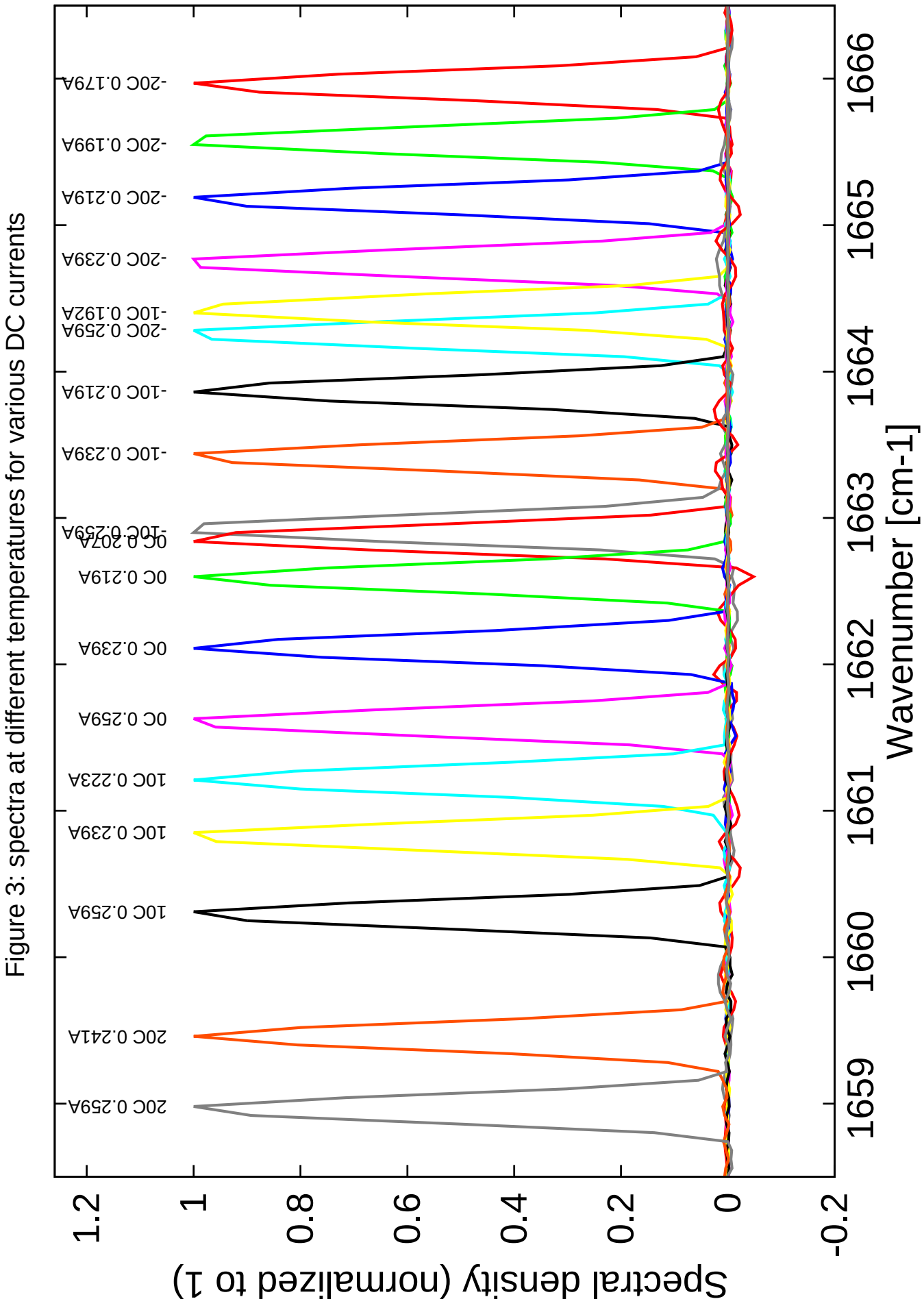

Figure 3: spectra at different temperatures for various DC currents

#sbcw2405 UP