Quantum Cascade Solutions
Avenue des Pâquiers 1
CH-2072 St-Blaise
T: +41 32 729 95 10
F: +41 32 729 95 19

Datasheet for #sbcw26114 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at
`https://www.alpeslasers.ch/resources/#faq`

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.

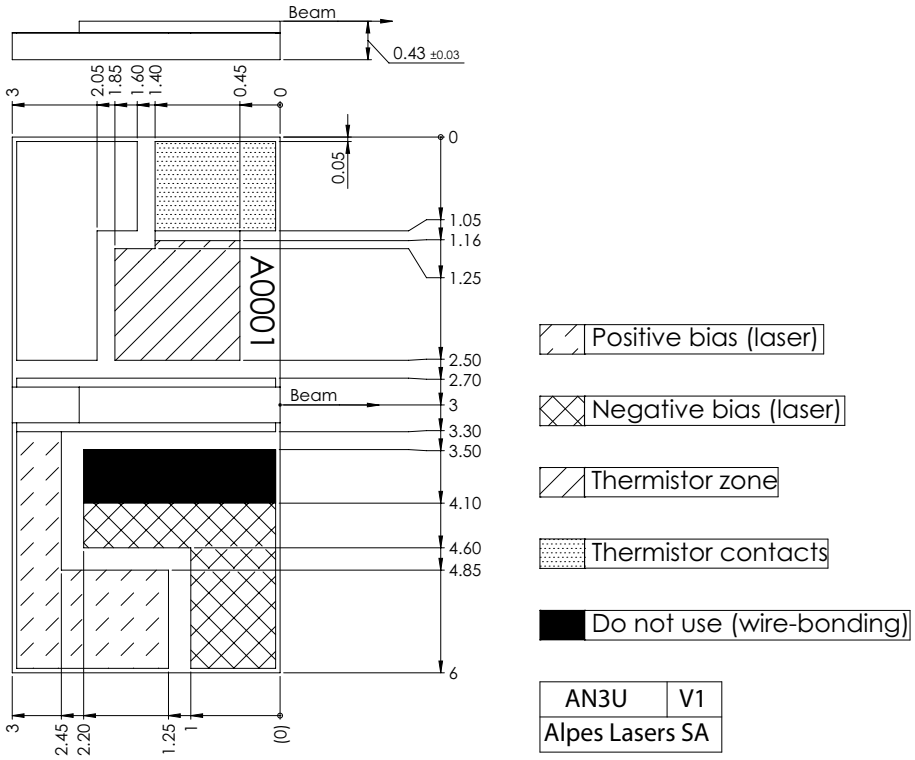

Figure 1: Mechanical and electrical interface for #sbcw26114 DN (please note that AlN submount numbering is A0V93)

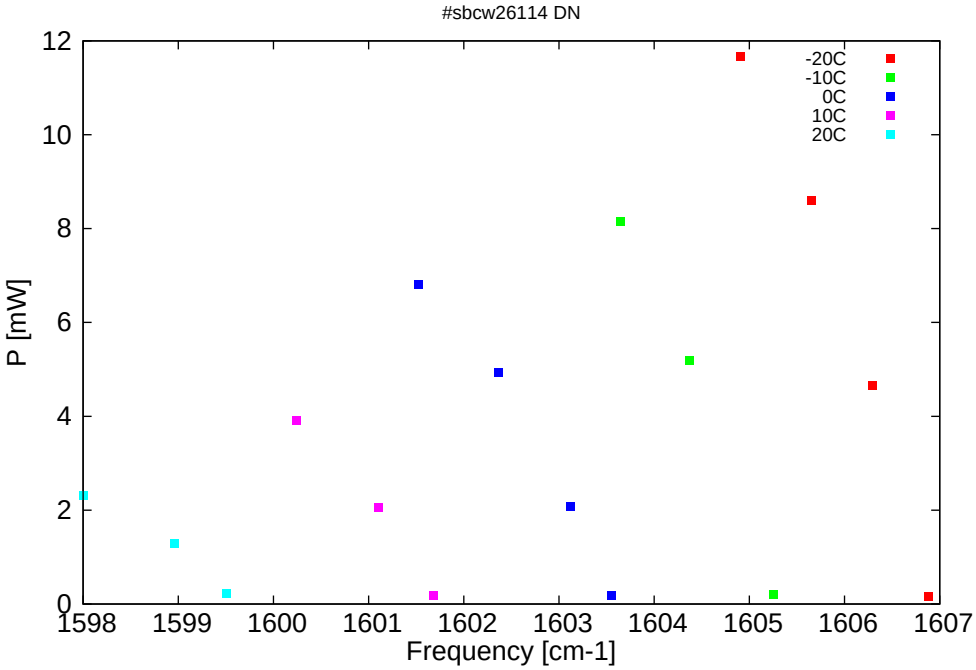

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

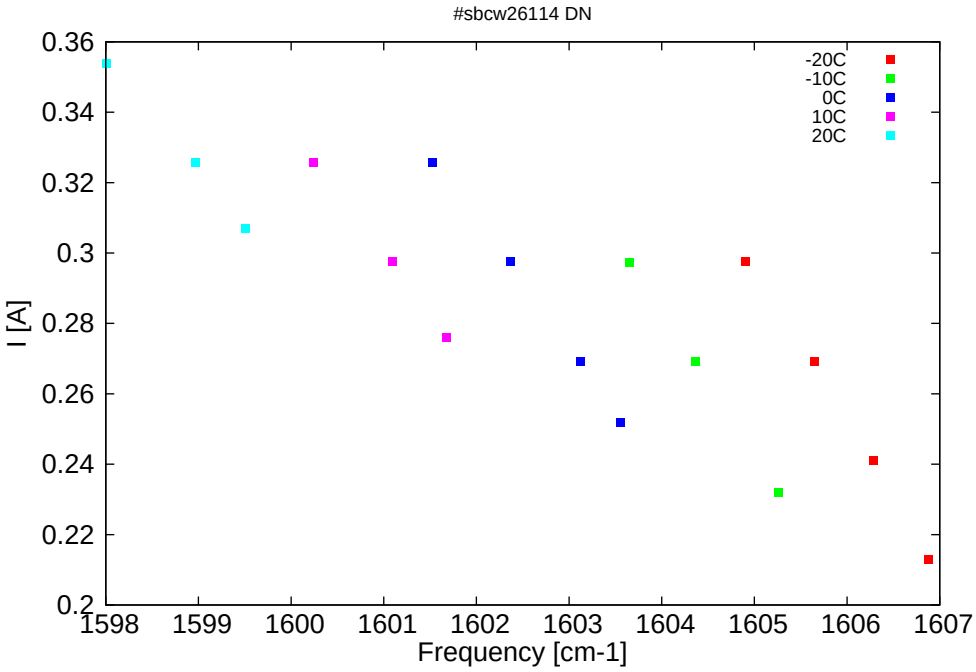

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
6223.2	1606.9	0.2	-20	10.17	0.213
6225.5	1606.3	4.7	-20	10.46	0.241
6228	1605.7	8.6	-20	10.76	0.269
6230.9	1604.9	11.7	-20	11.08	0.298
6229.5	1605.3	0.2	-10	10.25	0.232
6233	1604.4	5.2	-10	10.65	0.269
6235.8	1603.7	8.2	-10	10.97	0.297
6236.2	1603.6	0.2	0	10.36	0.252
6237.8	1603.1	2.1	0	10.56	0.269
6240.8	1602.4	4.9	0	10.87	0.298
6244	1601.5	6.8	0	11.21	0.326
6243.5	1601.7	0.2	10	10.55	0.276
6245.7	1601.1	2.1	10	10.78	0.298
6249.1	1600.2	3.9	10	11.12	0.326
6251.9	1599.5	0.2	20	10.8	0.307
6254.1	1599	1.3	20	11.03	0.326
6257.8	1598	2.3	20	11.37	0.354

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

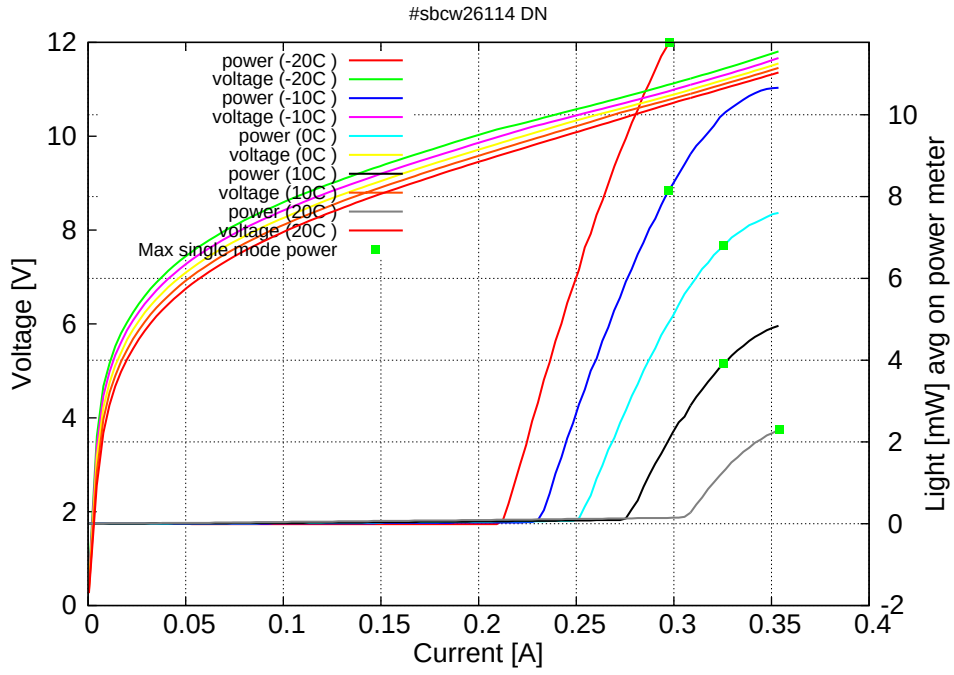

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.21A / Vth=10.15V (2-wires measurements). Maximum operation current: 0.3A between -20C and -10C, 0.33A between 0C and 10C, 0.355A at 20C.

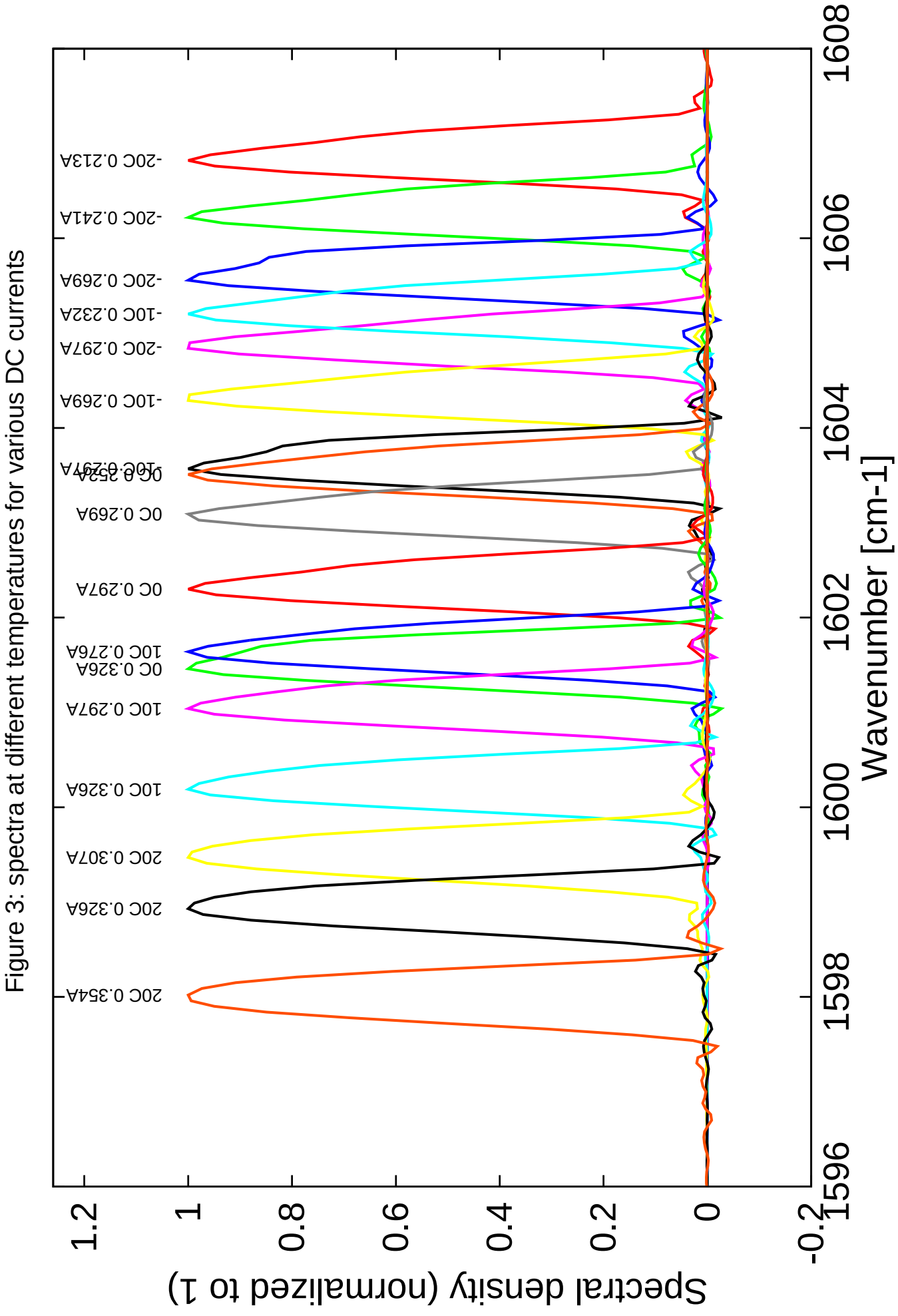

Figure 3: spectra at different temperatures for various DC currents