

**Datasheet for #sbcw10616 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 use with a power-supply ILX Lightwave LDX-3232 or equivalent.

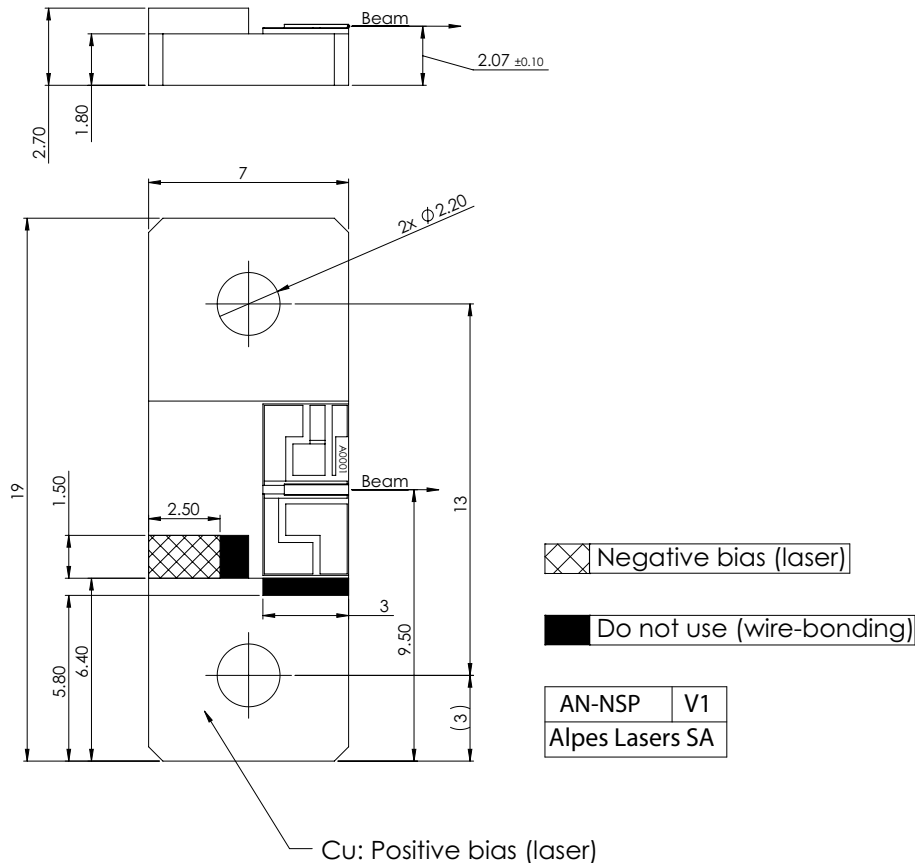


Figure 1: Support mounting for #sbcw10616 DN

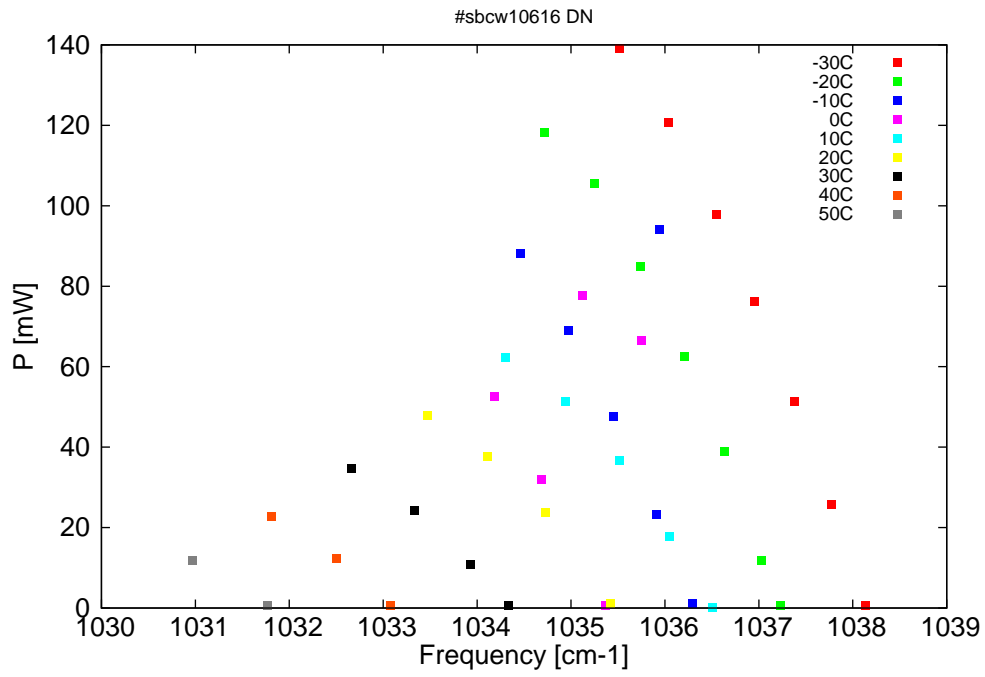


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

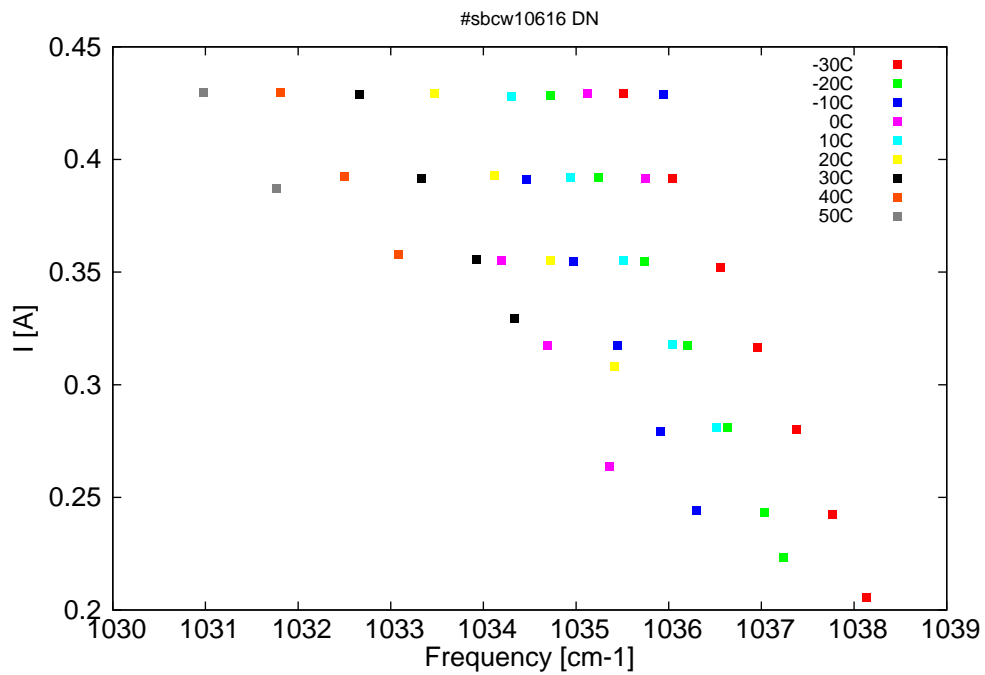


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9632.6	1038.1	0.7	-30	9.1	0.21
9636.1	1037.8	25.7	-30	9.4	0.24
9639.7	1037.4	51.4	-30	9.8	0.28
9643.6	1037	76.2	-30	10.1	0.32
9647.4	1036.6	97.9	-30	10.3	0.35
9652.2	1036	120.7	-30	10.6	0.39
9657	1035.5	139.1	-30	10.9	0.43
9641	1037.2	0.7	-20	9.2	0.22
9642.9	1037	11.9	-20	9.4	0.24
9646.6	1036.6	38.8	-20	9.7	0.28
9650.6	1036.2	62.6	-20	10	0.32
9654.9	1035.7	84.8	-20	10.3	0.35
9659.5	1035.2	105.5	-20	10.6	0.39
9664.4	1034.7	118.2	-20	10.9	0.43
9649.8	1036.3	1.1	-10	9.3	0.24
9653.4	1035.9	23.2	-10	9.6	0.28
9657.7	1035.4	47.6	-10	9.9	0.32
9662.1	1035	69.1	-10	10.2	0.35
9666.8	1034.5	88.1	-10	10.5	0.39
9653.1	1035.9	94	-10	10.8	0.43
9658.5	1035.4	0.6	0	9.4	0.26
9664.8	1034.7	31.9	0	9.8	0.32
9669.4	1034.2	52.6	0	10.2	0.35
9654.8	1035.7	66.6	0	10.5	0.39
9660.7	1035.1	77.8	0	10.8	0.43
9647.8	1036.5	0.1	10	9.5	0.28
9652.1	1036	17.7	10	9.8	0.32
9657.1	1035.5	36.6	10	10.1	0.36
9662.4	1034.9	51.3	10	10.4	0.39
9668.3	1034.3	62.2	10	10.7	0.43
9657.9	1035.4	1.1	20	9.6	0.31
9664.4	1034.7	23.7	20	10	0.36
9670.1	1034.1	37.7	20	10.3	0.39
9676.1	1033.5	48	20	10.7	0.43
9668.1	1034.3	0.6	30	9.7	0.33
9671.8	1033.9	10.8	30	10	0.36
9677.4	1033.3	24.3	30	10.3	0.39
9683.8	1032.7	34.8	30	10.6	0.43
9679.8	1033.1	0.7	40	9.9	0.36
9685.2	1032.5	12.4	40	10.2	0.39
9691.7	1031.8	22.8	40	10.5	0.43
9692.1	1031.8	0.7	50	10.1	0.39
9699.6	1031	11.8	50	10.5	0.43

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

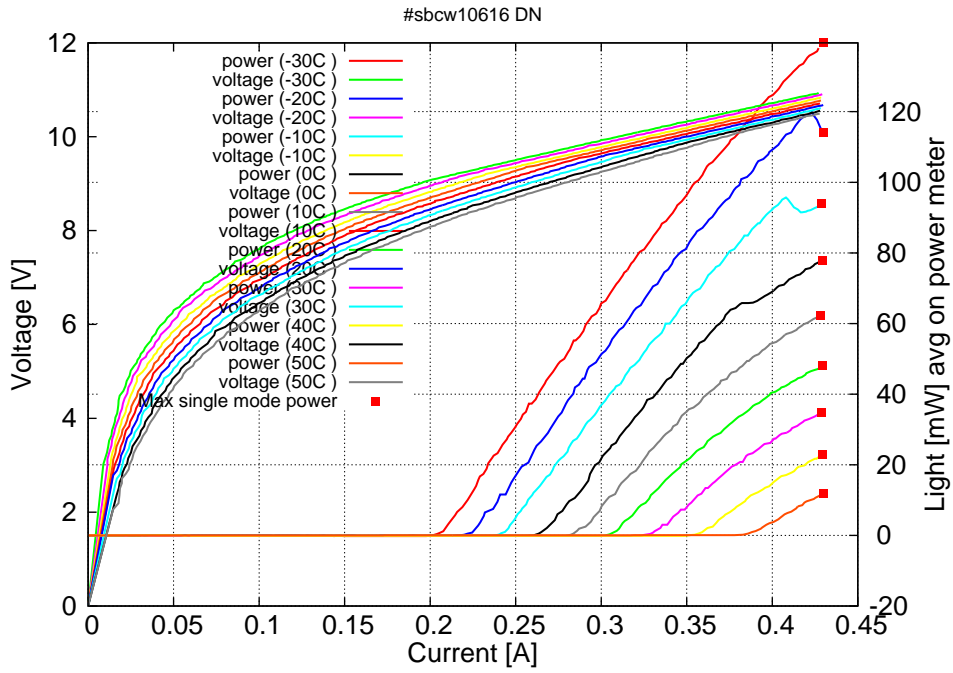


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -30C:  $I_{th}=0.20A$  /  $V_{th}=9.1V$  (2-wires measurements). Maximum operation current: 0.43A for all temperatures.



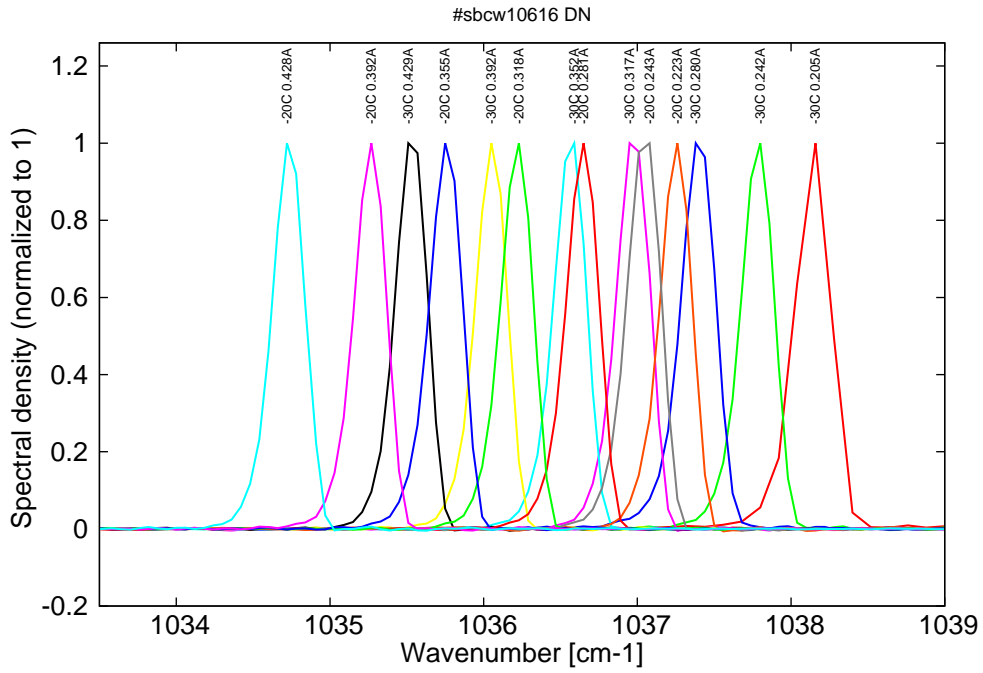


Figure 5: spectra at -30C and -20C for various DC currents (all monomode on mode 1, see Fig. 2 & 3)

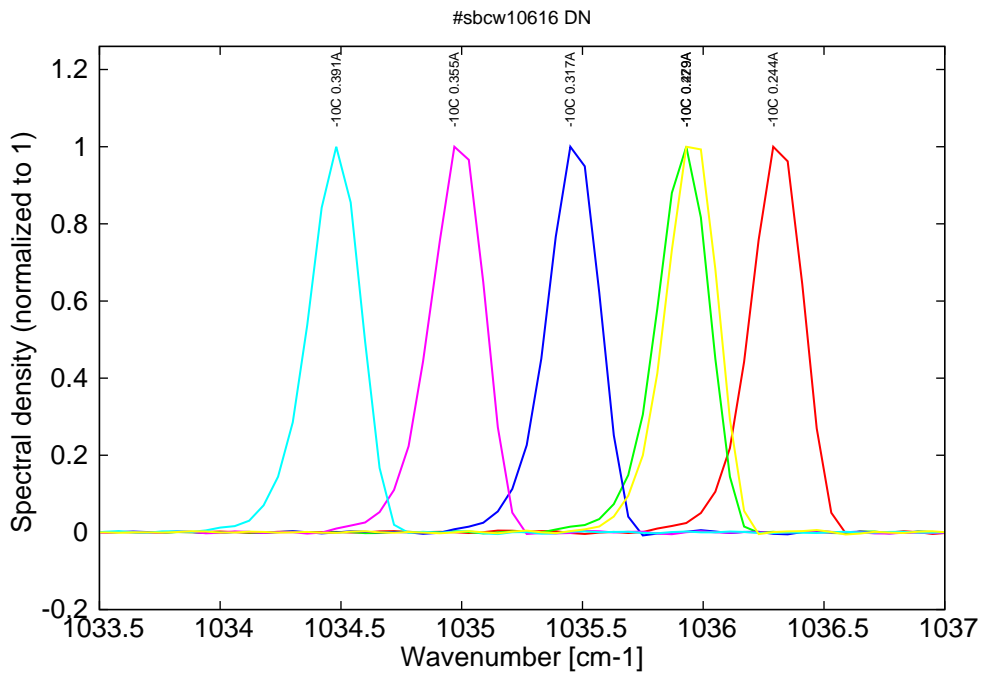


Figure 6: spectra at -10C for various DC currents (monomode on mode 1 up to 0.39A, then on mode 2, see Fig. 2 & 3)

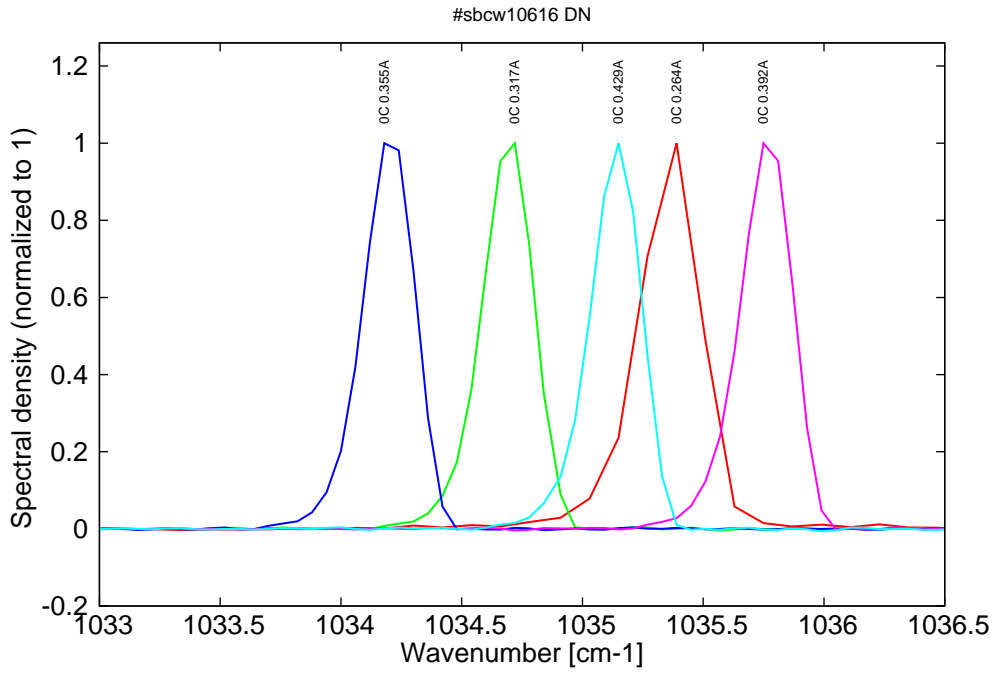


Figure 7: spectra at 0C for various DC currents (monomode on mode 1 up to 0.355A, then on mode 2, see Fig. 2 & 3)

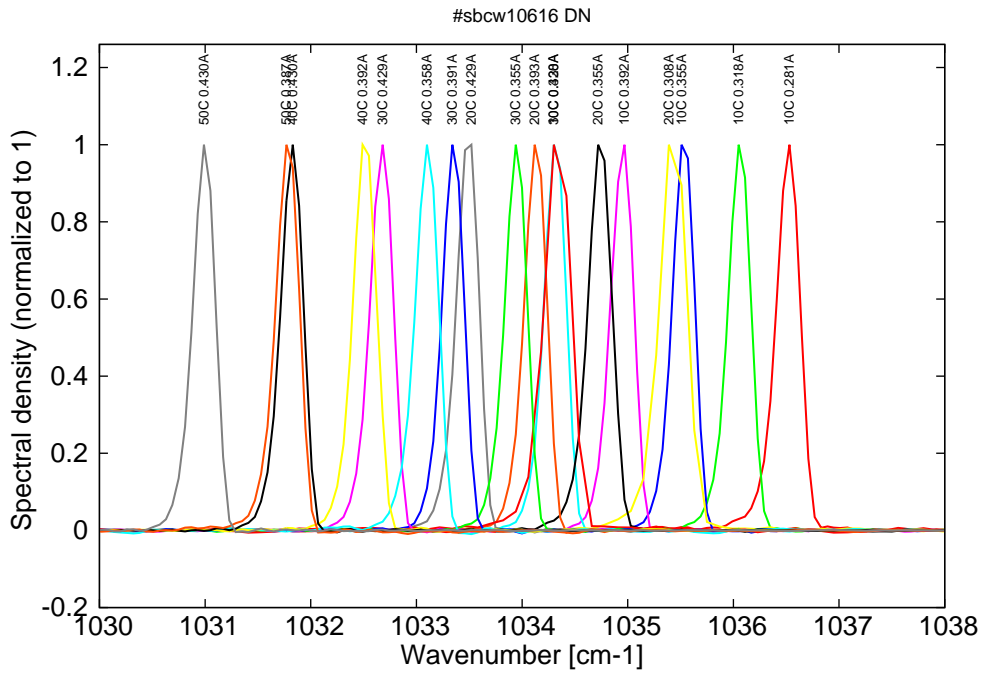


Figure 8: spectra between 10C and 50C for various DC currents (all monomode on mode 2, see Fig. 2 & 3)