

Datasheet for #sbcw23916 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.

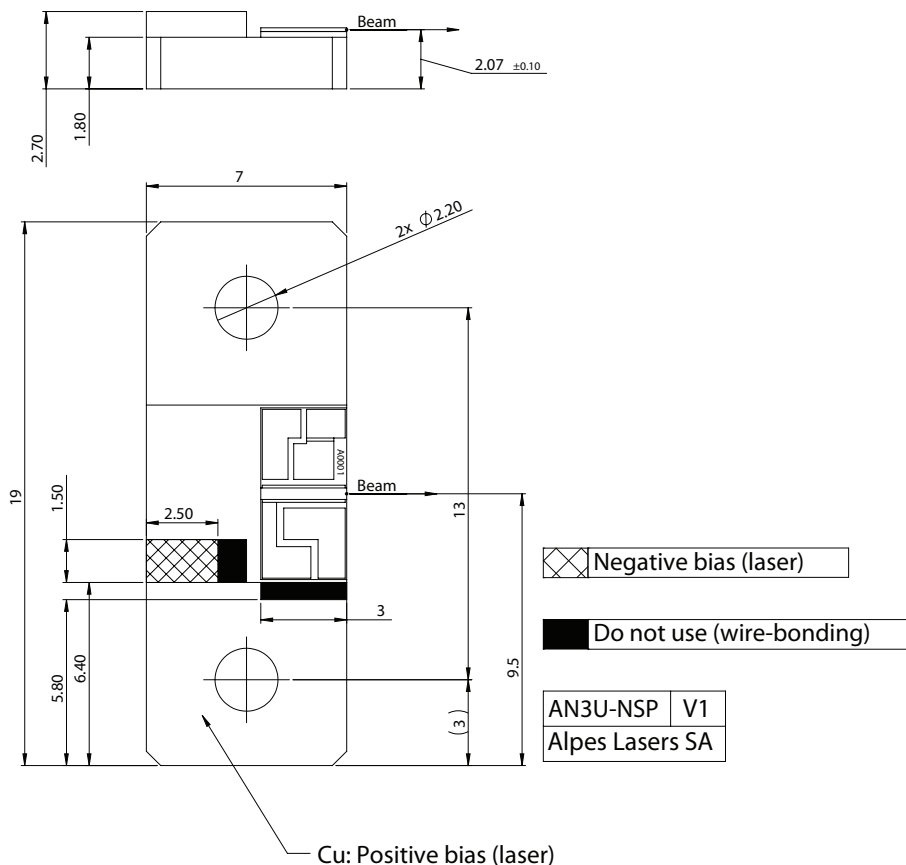


Figure 1: Mechanical and electrical interface for #sbcw23916 DN

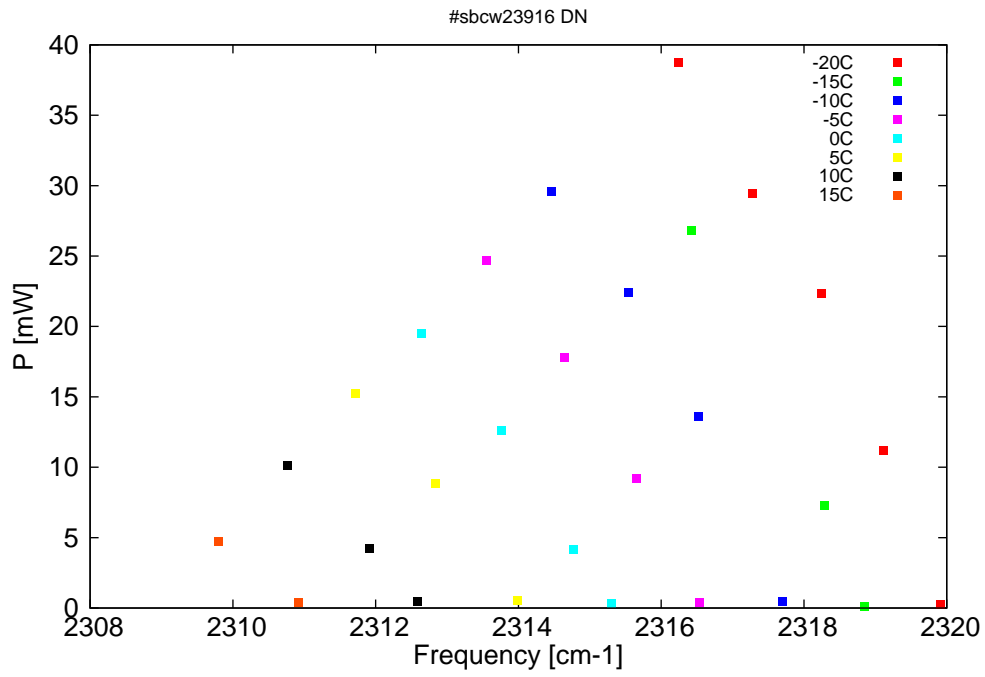


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

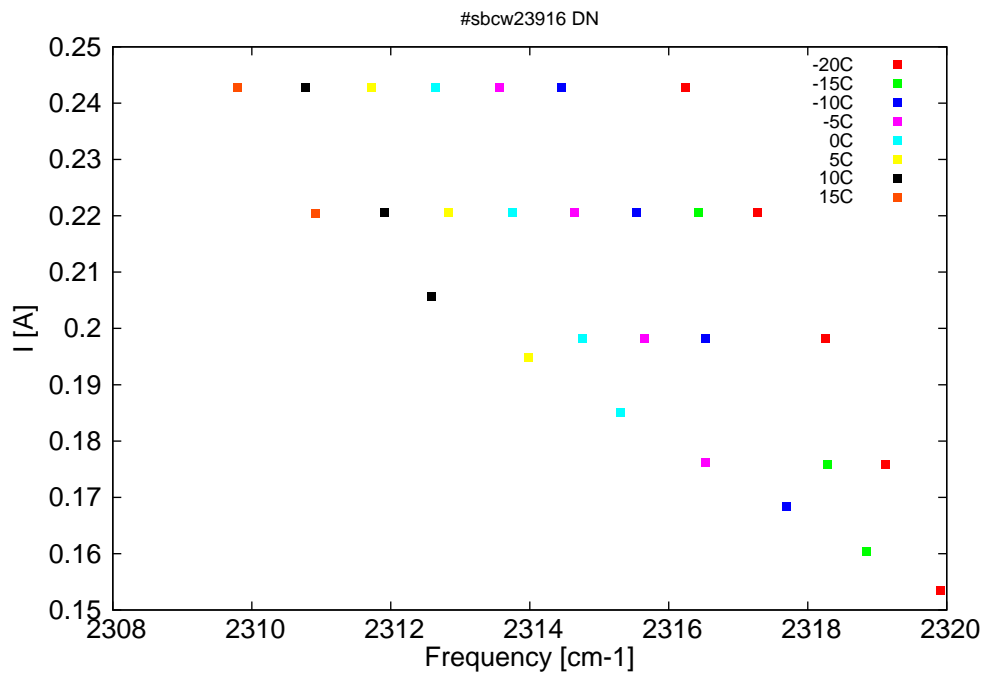


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4310.5	2319.9	0.2	-20	13.06	0.154
4312	2319.1	11.2	-20	13.32	0.176
4313.6	2318.3	22.3	-20	13.59	0.198
4315.4	2317.3	29.4	-20	13.86	0.221
4317.3	2316.2	38.7	-20	14.13	0.243
4312.5	2318.8	0.1	-15	13.1	0.16
4313.5	2318.3	7.3	-15	13.27	0.176
4317	2316.4	26.8	-15	13.82	0.221
4314.6	2317.7	0.4	-10	13.16	0.168
4316.8	2316.5	13.6	-10	13.5	0.198
4318.6	2315.5	22.4	-10	13.77	0.221
4320.7	2314.5	29.6	-10	14.05	0.243
4316.8	2316.5	0.4	-5	13.21	0.176
4318.4	2315.7	9.2	-5	13.46	0.198
4320.3	2314.6	17.8	-5	13.74	0.221
4322.3	2313.6	24.7	-5	14.01	0.243
4319.1	2315.3	0.3	0	13.28	0.185
4320.1	2314.8	4.2	0	13.43	0.198
4322	2313.8	12.6	0	13.7	0.221
4324.1	2312.6	19.5	0	13.97	0.243
4321.5	2314	0.6	5	13.37	0.195
4323.7	2312.8	8.8	5	13.67	0.221
4325.8	2311.7	15.2	5	13.94	0.243
4324.2	2312.6	0.4	10	13.48	0.206
4325.4	2311.9	4.2	10	13.64	0.221
4327.6	2310.8	10.2	10	13.91	0.243
4327.3	2310.9	0.4	15	13.64	0.22
4329.4	2309.8	4.7	15	13.89	0.243

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

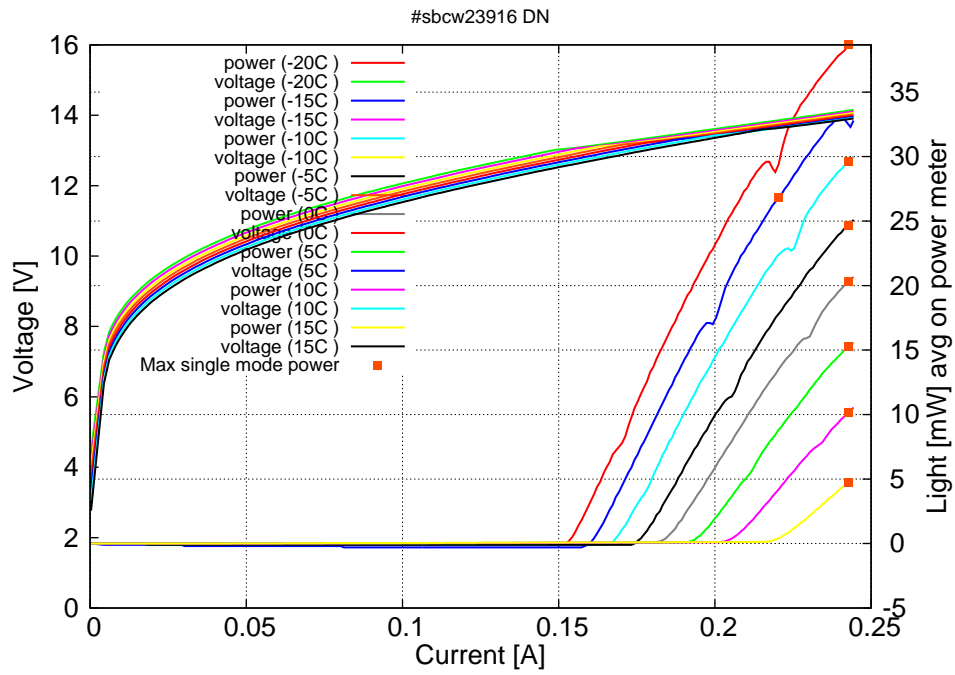


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=13.0V$ (2-wires measurements). Maximum operation current: 0.245A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

