

Datasheet for #sbcw21582 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.

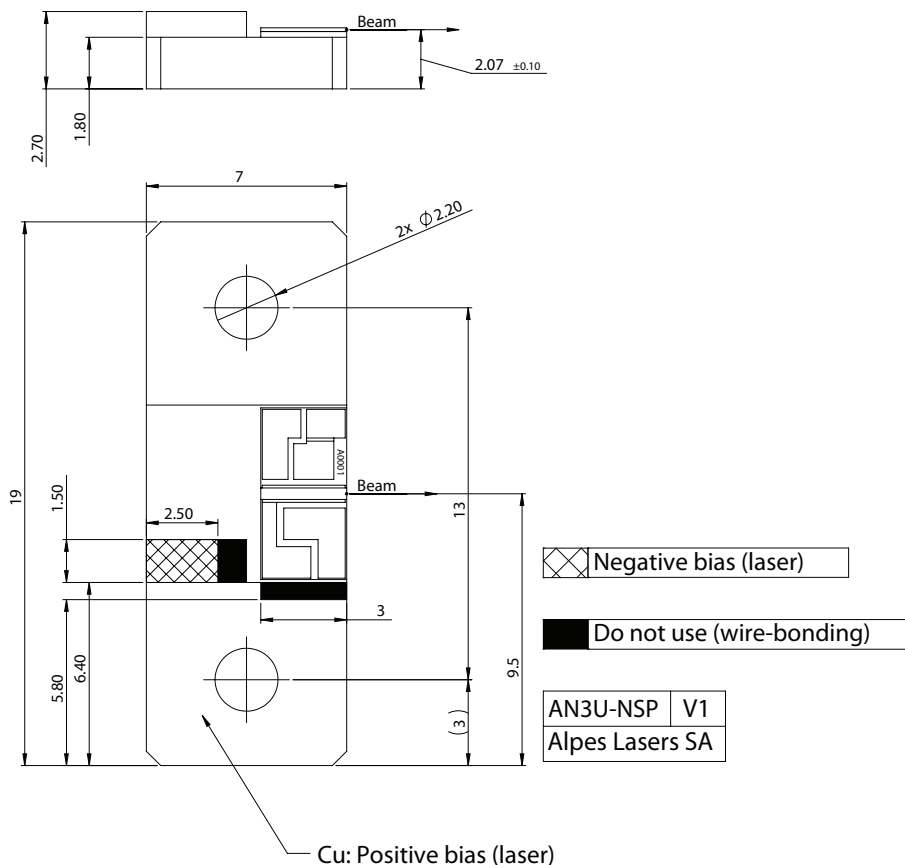


Figure 1: Mechanical and electrical interface for #sbcw21582 DN

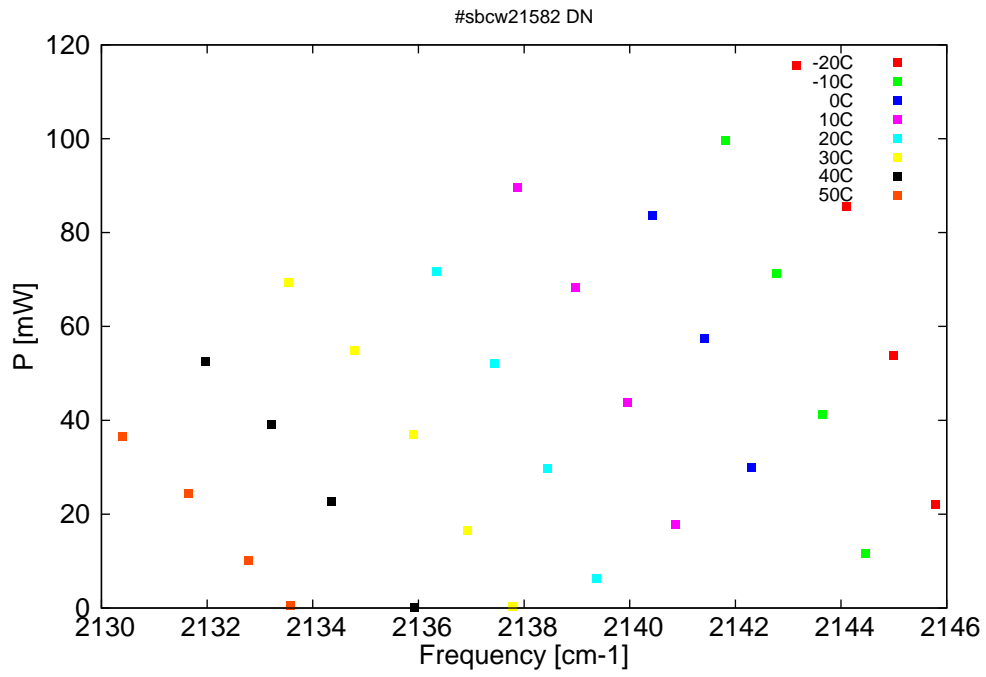


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

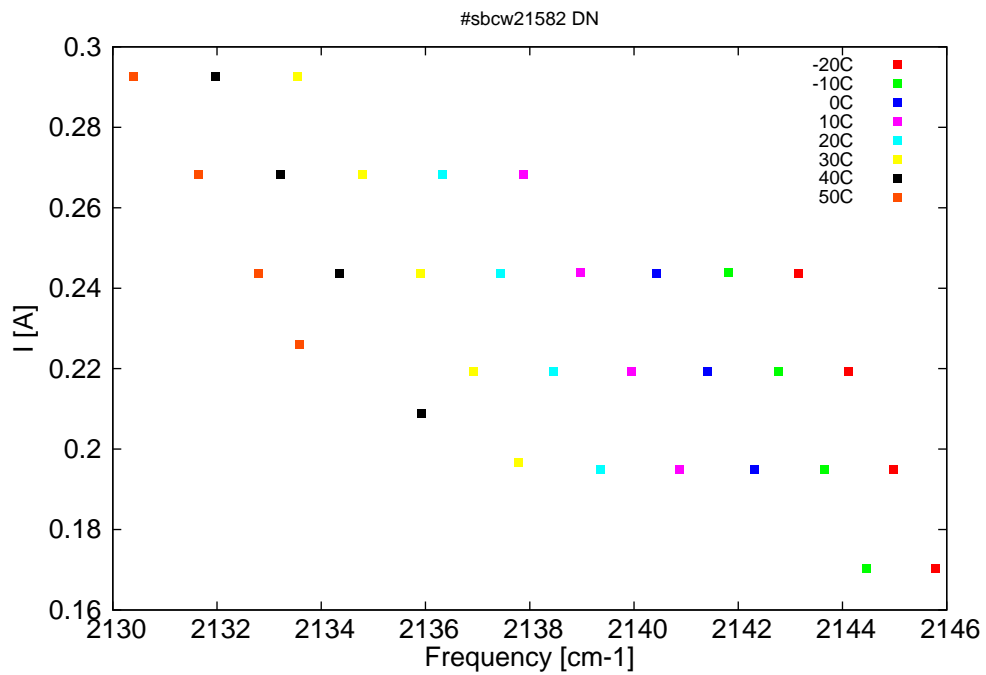


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4660.3	2145.8	22	-20	11.49	0.17
4662	2145	53.8	-20	11.61	0.195
4663.9	2144.1	85.6	-20	11.77	0.219
4666	2143.2	115.5	-20	11.95	0.244
4663.2	2144.5	11.7	-10	11.44	0.17
4664.9	2143.7	41.3	-10	11.55	0.195
4666.8	2142.8	71.3	-10	11.71	0.219
4669	2141.8	99.7	-10	11.89	0.244
4667.9	2142.3	29.9	0	11.5	0.195
4669.8	2141.4	57.5	0	11.65	0.219
4671.9	2140.4	83.7	0	11.83	0.244
4671	2140.9	17.7	10	11.45	0.195
4673	2140	43.8	10	11.59	0.219
4675.1	2139	68.2	10	11.77	0.244
4677.5	2137.9	89.6	10	11.97	0.268
4674.3	2139.4	6.4	20	11.42	0.195
4676.3	2138.4	29.8	20	11.54	0.219
4678.5	2137.4	52.1	20	11.71	0.244
4680.9	2136.3	71.8	20	11.9	0.268
4677.8	2137.8	0.2	30	11.42	0.197
4679.6	2136.9	16.5	30	11.51	0.219
4681.9	2135.9	37	30	11.66	0.244
4684.3	2134.8	55	30	11.85	0.268
4687	2133.5	69.3	30	12.06	0.293
4681.8	2135.9	0.1	40	11.46	0.209
4685.3	2134.4	22.7	40	11.62	0.244
4687.7	2133.2	39	40	11.8	0.268
4690.5	2132	52.5	40	12	0.293
4687	2133.6	0.6	50	11.52	0.226
4688.7	2132.8	10.1	50	11.59	0.244
4691.2	2131.7	24.5	50	11.75	0.268
4694	2130.4	36.6	50	11.95	0.293

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

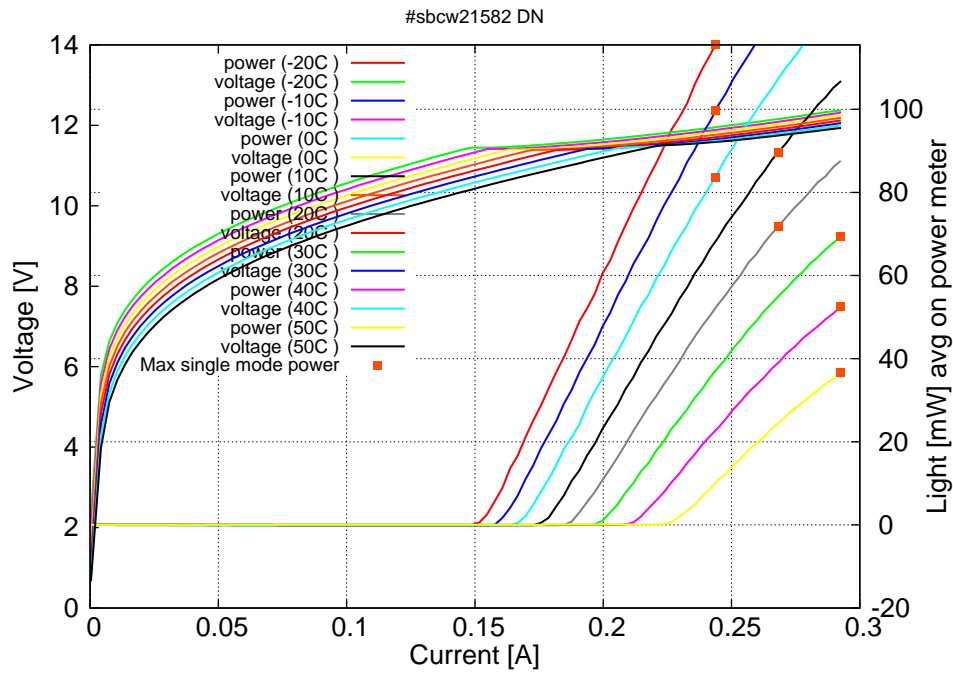


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=11.4V$ (2-wires measurements). Maximum operation current: 0.25A between -20C and 0C, 0.27A between 10C and 20C, 0.295A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

