

Datasheet for #sbcw22895 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 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.

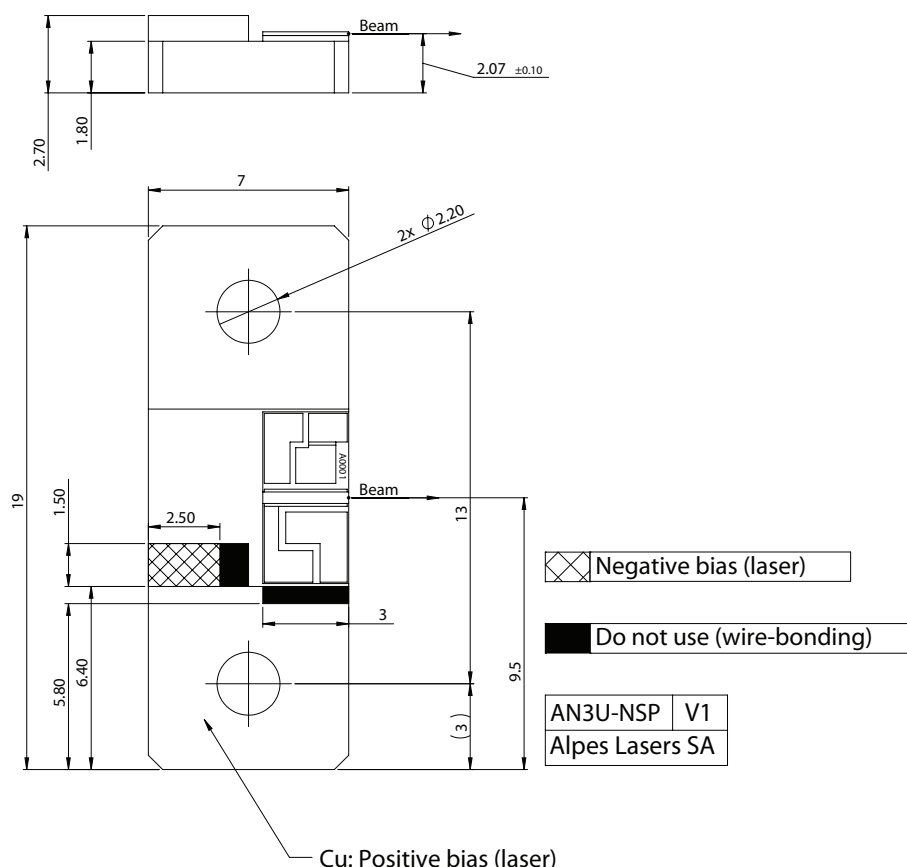


Figure 1: Mechanical and electrical interface for #sbcw22895 DN

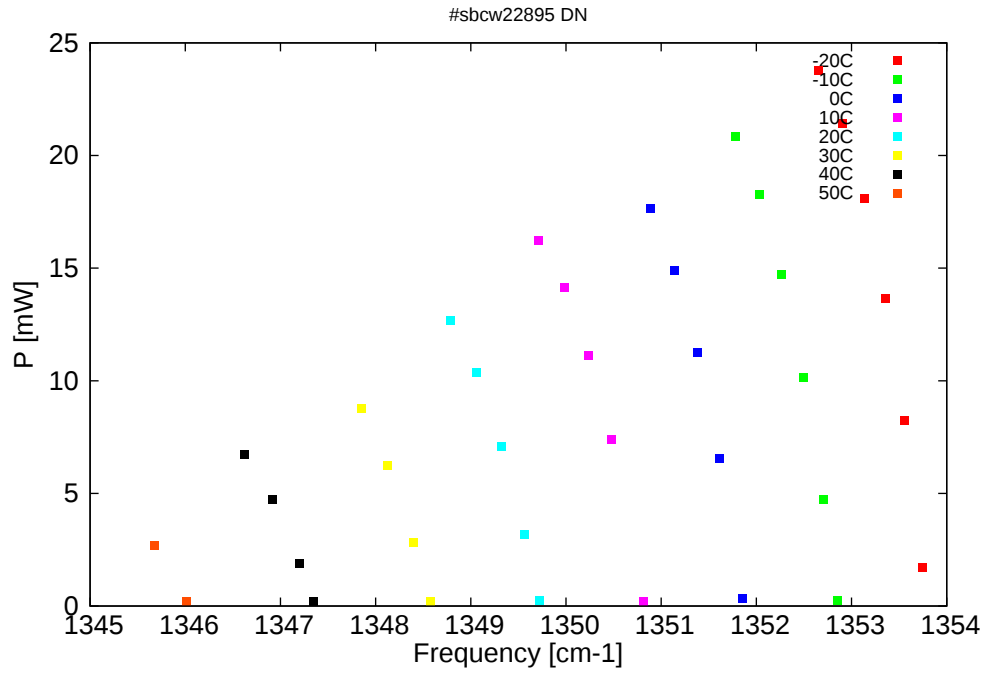


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

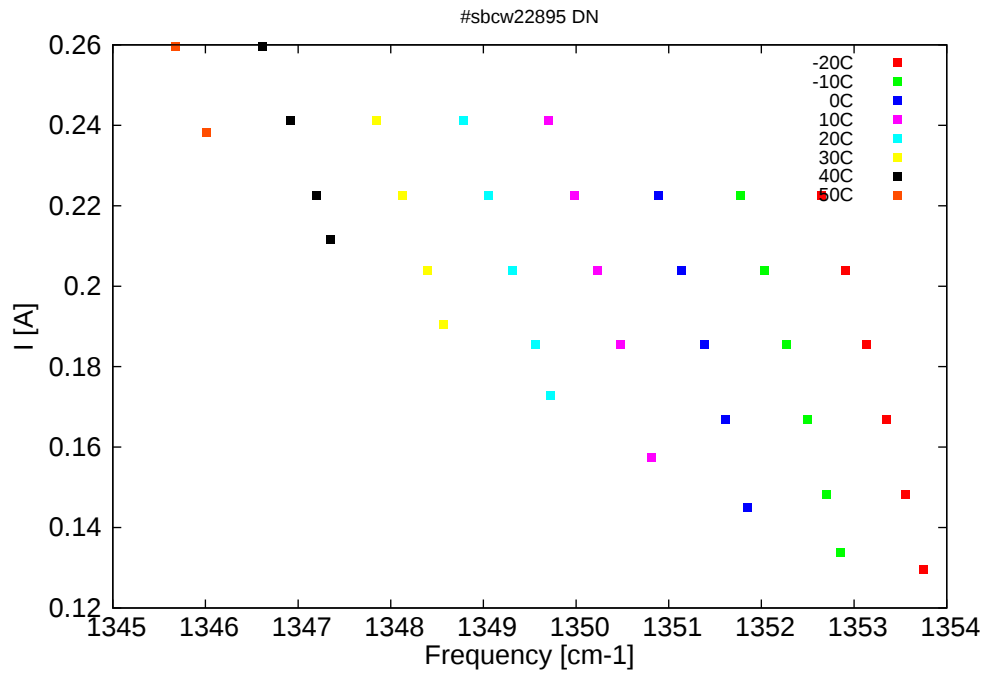


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
7386.9	1353.7	1.7	-20	8.88	0.13
7387.9	1353.6	8.2	-20	9.12	0.148
7389	1353.4	13.7	-20	9.36	0.167
7390.3	1353.1	18.1	-20	9.6	0.185
7391.5	1352.9	21.4	-20	9.84	0.204
7392.9	1352.6	23.8	-20	10.08	0.223
7391.8	1352.8	0.2	-10	8.83	0.134
7392.6	1352.7	4.7	-10	9.01	0.148
7393.7	1352.5	10.1	-10	9.25	0.167
7395	1352.3	14.7	-10	9.49	0.185
7396.3	1352	18.3	-10	9.73	0.204
7397.7	1351.8	20.8	-10	9.97	0.223
7397.3	1351.9	0.3	0	8.88	0.145
7398.6	1351.6	6.6	0	9.15	0.167
7399.8	1351.4	11.3	0	9.39	0.185
7401.1	1351.1	14.9	0	9.62	0.204
7402.5	1350.9	17.7	0	9.86	0.223
7402.9	1350.8	0.2	10	8.94	0.158
7404.8	1350.5	7.4	10	9.29	0.185
7406.1	1350.2	11.1	10	9.52	0.204
7407.5	1350	14.1	10	9.75	0.223
7409	1349.7	16.2	10	9.99	0.241
7408.9	1349.7	0.2	20	9.04	0.173
7409.8	1349.6	3.2	20	9.19	0.185
7411.2	1349.3	7.1	20	9.42	0.204
7412.6	1349.1	10.4	20	9.65	0.223
7414.1	1348.8	12.7	20	9.88	0.241
7415.2	1348.6	0.2	30	9.16	0.191
7416.2	1348.4	2.8	30	9.32	0.204
7417.7	1348.1	6.3	30	9.55	0.223
7419.2	1347.9	8.8	30	9.78	0.241
7422	1347.3	0.2	40	9.32	0.212
7422.8	1347.2	1.9	40	9.45	0.223
7424.4	1346.9	4.7	40	9.67	0.241
7426	1346.6	6.7	40	9.9	0.26
7429.4	1346	0.2	50	9.53	0.238
7431.2	1345.7	2.7	50	9.79	0.26

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

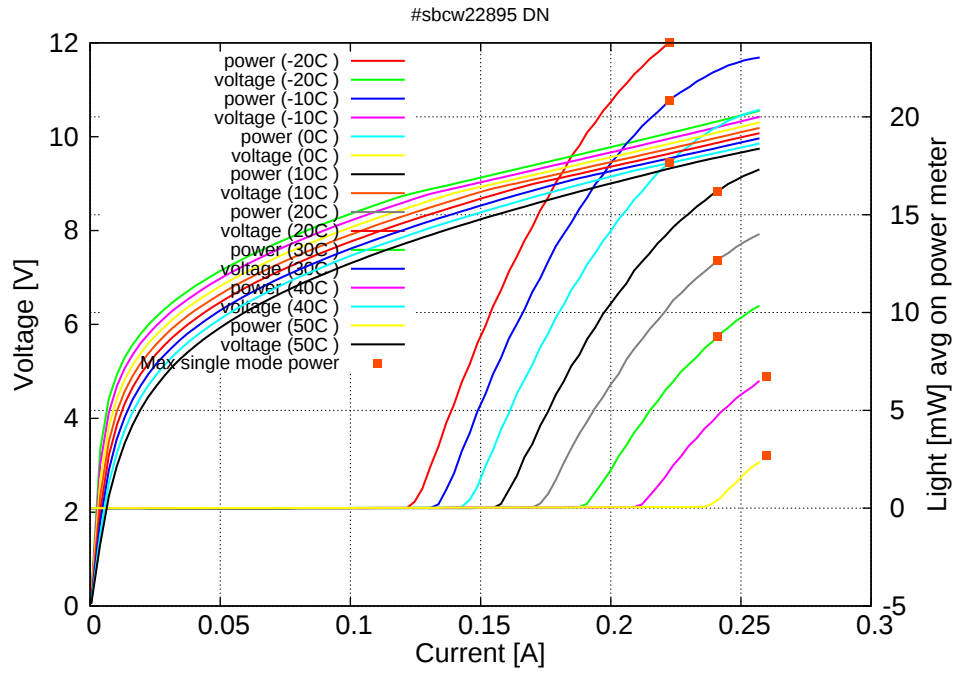


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.225A between -20C and 0C, 0.24A between 10C and 30C, 0.26A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

