

Datasheet for #sbcw25908 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.

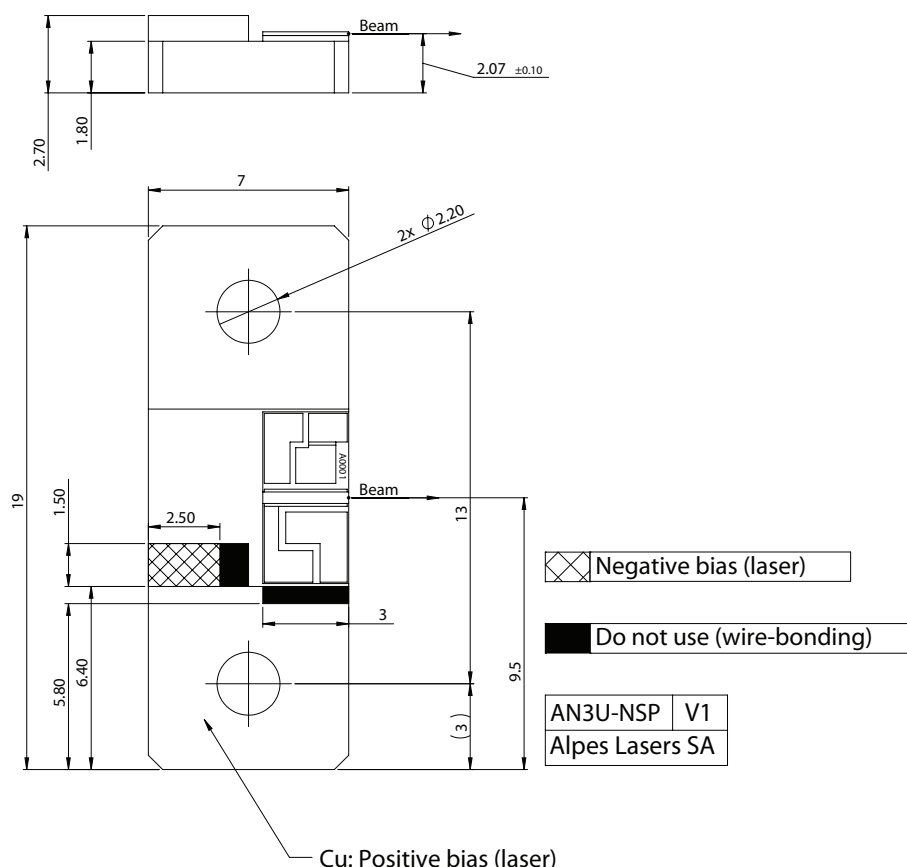


Figure 1: Mechanical and electrical interface for #sbcw25908 DN

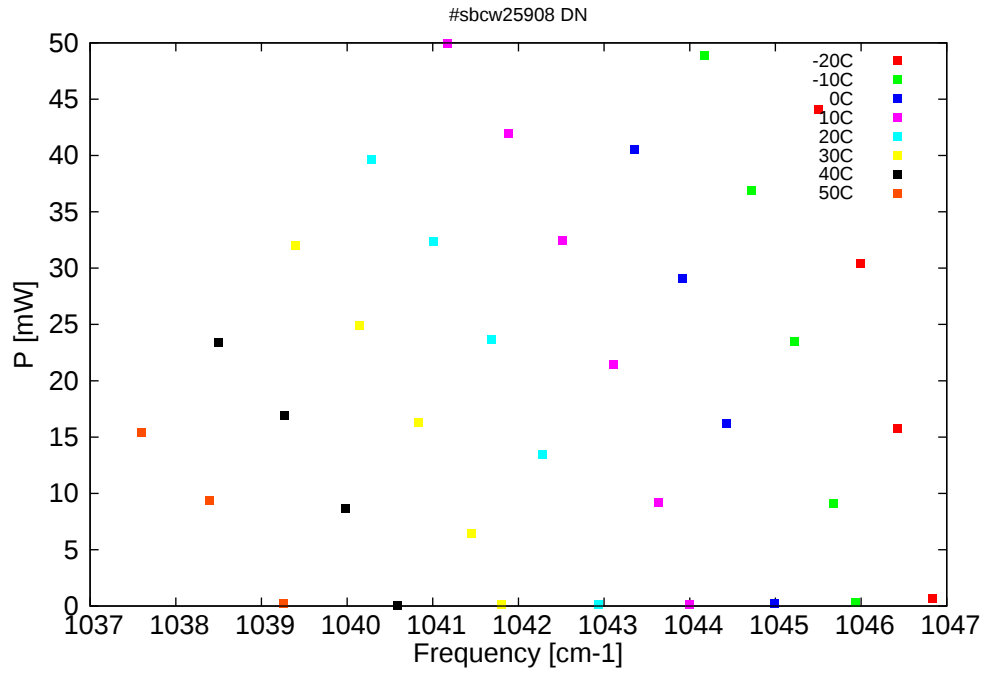


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

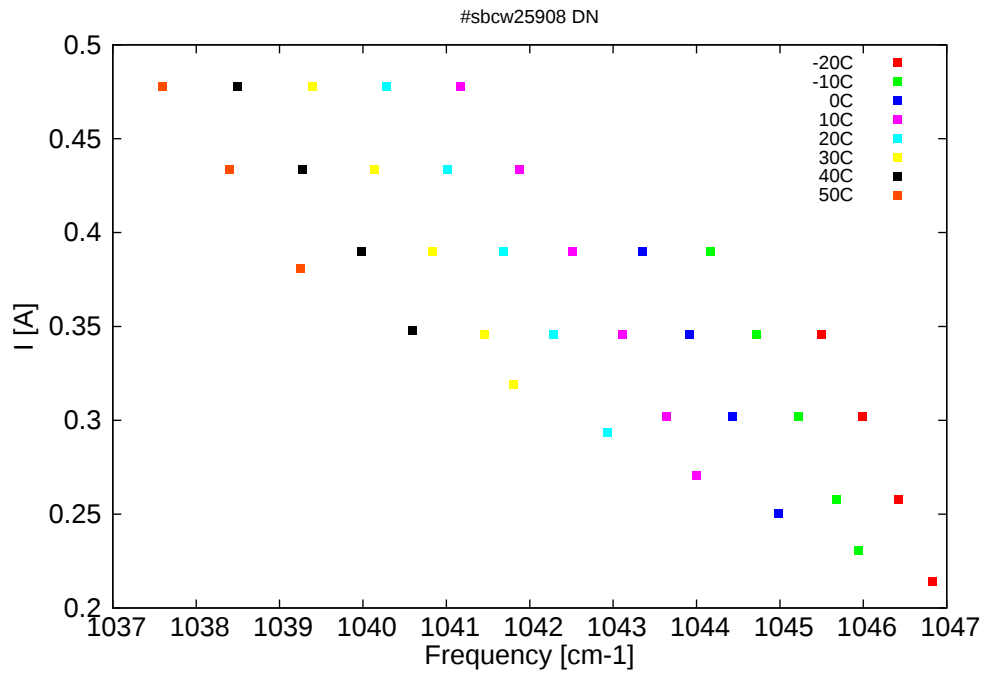


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
9552.6	1046.8	0.7	-20	8.98	0.214
9556.3	1046.4	15.8	-20	9.36	0.258
9560.3	1046	30.4	-20	9.73	0.302
9564.8	1045.5	44.1	-20	10.09	0.346
9560.8	1045.9	0.3	-10	9.05	0.231
9563.2	1045.7	9.1	-10	9.29	0.258
9567.4	1045.2	23.5	-10	9.67	0.302
9572	1044.7	36.9	-10	10.03	0.346
9577	1044.2	48.9	-10	10.38	0.39
9569.5	1045	0.2	0	9.15	0.25
9574.6	1044.4	16.2	0	9.6	0.302
9579.3	1043.9	29.1	0	9.97	0.346
9584.5	1043.4	40.6	0	10.33	0.39
9578.6	1044	0.2	10	9.27	0.271
9581.9	1043.6	9.2	10	9.54	0.302
9586.7	1043.1	21.5	10	9.91	0.346
9592.2	1042.5	32.4	10	10.27	0.39
9598	1041.9	41.9	10	10.64	0.434
9604.6	1041.2	49.9	10	11.01	0.478
9588.3	1042.9	0.1	20	9.4	0.294
9594.3	1042.3	13.4	20	9.85	0.346
9599.9	1041.7	23.7	20	10.22	0.39
9606	1041	32.3	20	10.59	0.434
9612.7	1040.3	39.6	20	10.96	0.478
9598.7	1041.8	0.1	30	9.56	0.319
9601.9	1041.5	6.5	30	9.79	0.346
9607.7	1040.8	16.3	30	10.17	0.39
9614.1	1040.1	24.9	30	10.54	0.434
9621	1039.4	32	30	10.91	0.478
9609.9	1040.6	0.1	40	9.75	0.348
9615.6	1040	8.7	40	10.11	0.39
9622.1	1039.3	16.9	40	10.48	0.434
9629.3	1038.5	23.4	40	10.86	0.478
9622.3	1039.3	0.2	50	9.97	0.381
9630.3	1038.4	9.3	50	10.43	0.434
9637.7	1037.6	15.4	50	10.81	0.478

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

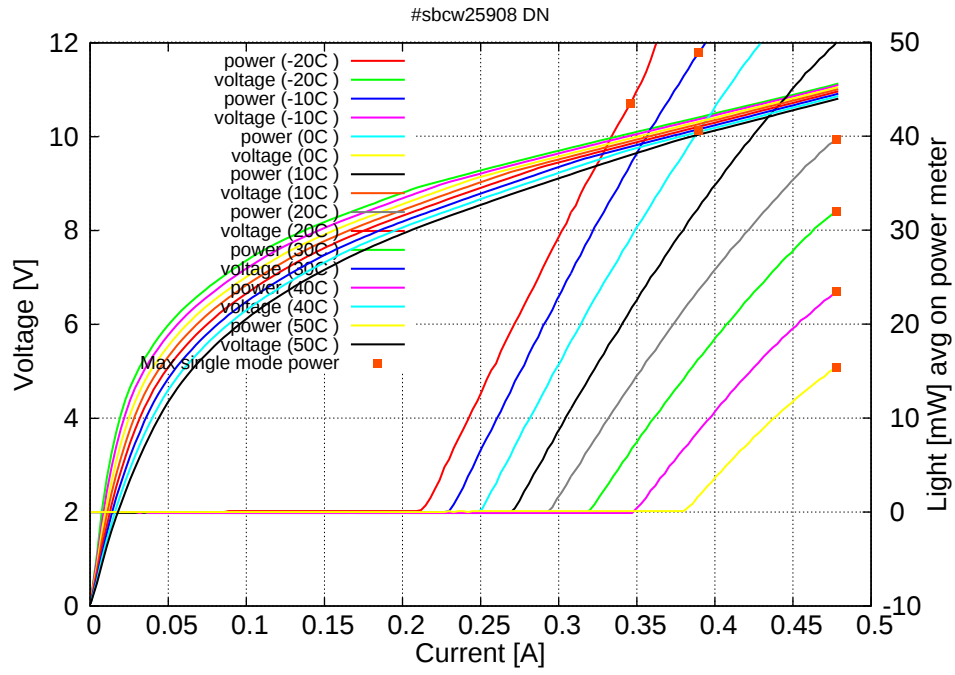


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.345A at -20C, 0.39A between -10C and 0C, 0.48A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

