

Datasheet for #sbcw22544 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.

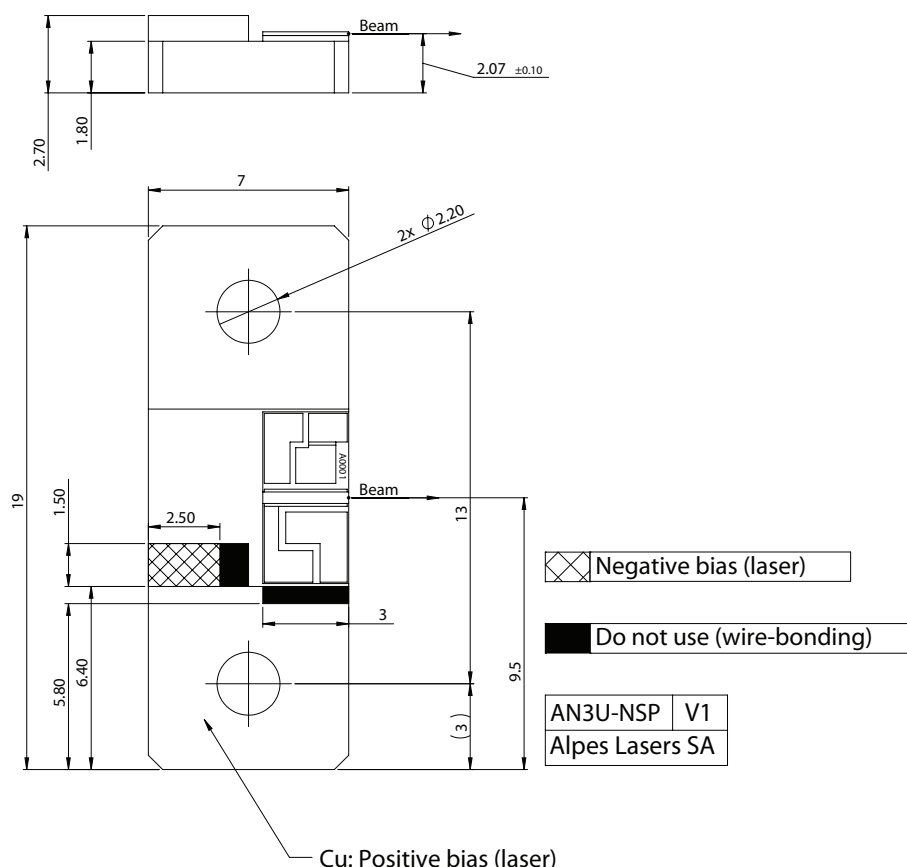


Figure 1: Mechanical and electrical interface for #sbcw22544 DN

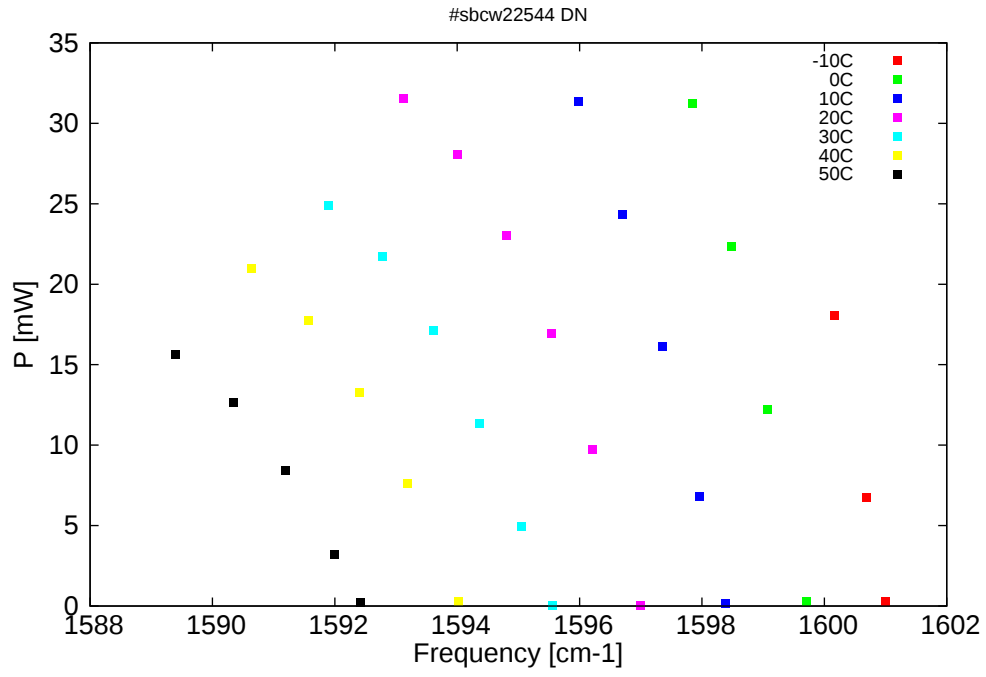


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

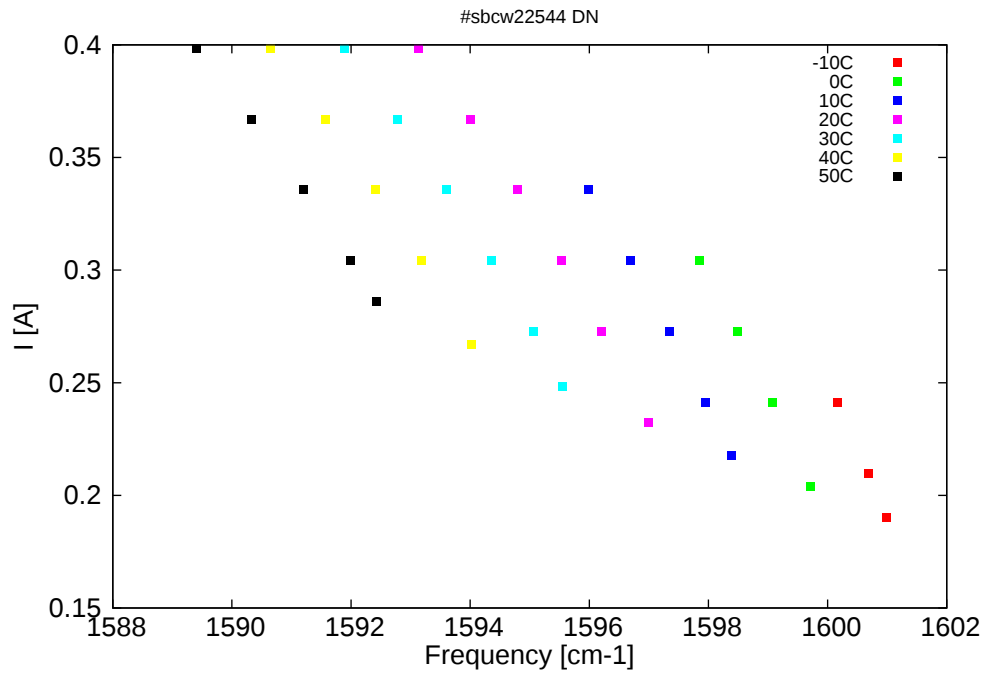


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
6246.1	1601	0.3	-10	8.49	0.19
6247.3	1600.7	6.7	-10	8.67	0.21
6249.4	1600.2	18	-10	8.95	0.241
6251.1	1599.7	0.3	0	8.53	0.204
6253.6	1599.1	12.2	0	8.88	0.241
6255.9	1598.5	22.3	0	9.16	0.273
6258.4	1597.9	31.2	0	9.45	0.304
6256.3	1598.4	0.1	10	8.59	0.218
6258	1598	6.8	10	8.81	0.241
6260.4	1597.4	16.1	10	9.1	0.273
6262.9	1596.7	24.4	10	9.39	0.304
6265.7	1596	31.3	10	9.68	0.336
6261.7	1597	0	20	8.66	0.232
6264.8	1596.2	9.7	20	9.03	0.273
6267.5	1595.5	16.9	20	9.33	0.304
6270.4	1594.8	23	20	9.63	0.336
6273.5	1594	28.1	20	9.94	0.367
6277	1593.1	31.5	20	10.26	0.399
6267.4	1595.6	0	30	8.74	0.248
6269.4	1595.1	5	30	8.97	0.273
6272.1	1594.4	11.4	30	9.27	0.304
6275.1	1593.6	17.1	30	9.58	0.336
6278.3	1592.8	21.7	30	9.89	0.367
6281.8	1591.9	24.9	30	10.2	0.399
6273.5	1594	0.2	40	8.85	0.267
6276.7	1593.2	7.6	40	9.21	0.304
6279.8	1592.4	13.3	40	9.52	0.336
6283.1	1591.6	17.8	40	9.83	0.367
6286.8	1590.6	21	40	10.15	0.399
6279.7	1592.4	0.2	50	8.97	0.286
6281.4	1592	3.2	50	9.14	0.304
6284.6	1591.2	8.4	50	9.46	0.336
6288	1590.3	12.6	50	9.76	0.367
6291.7	1589.4	15.7	50	10.08	0.399

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

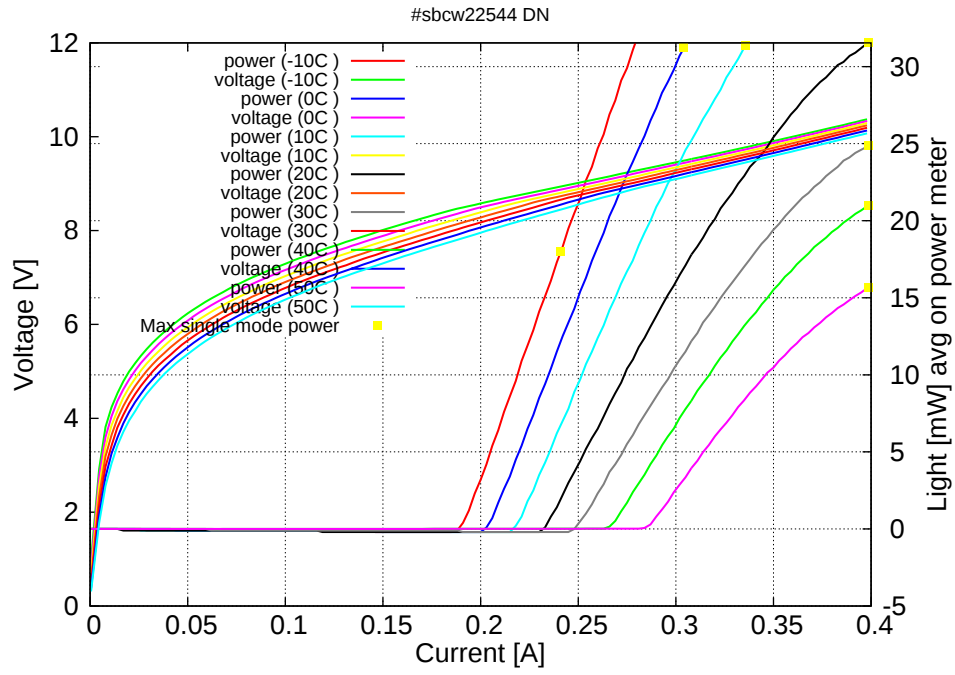


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.19A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.24A at -10C, 0.305A at 0C, 0.335A at 10C, 0.40A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

