

Datasheet for #sbcw22545 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.

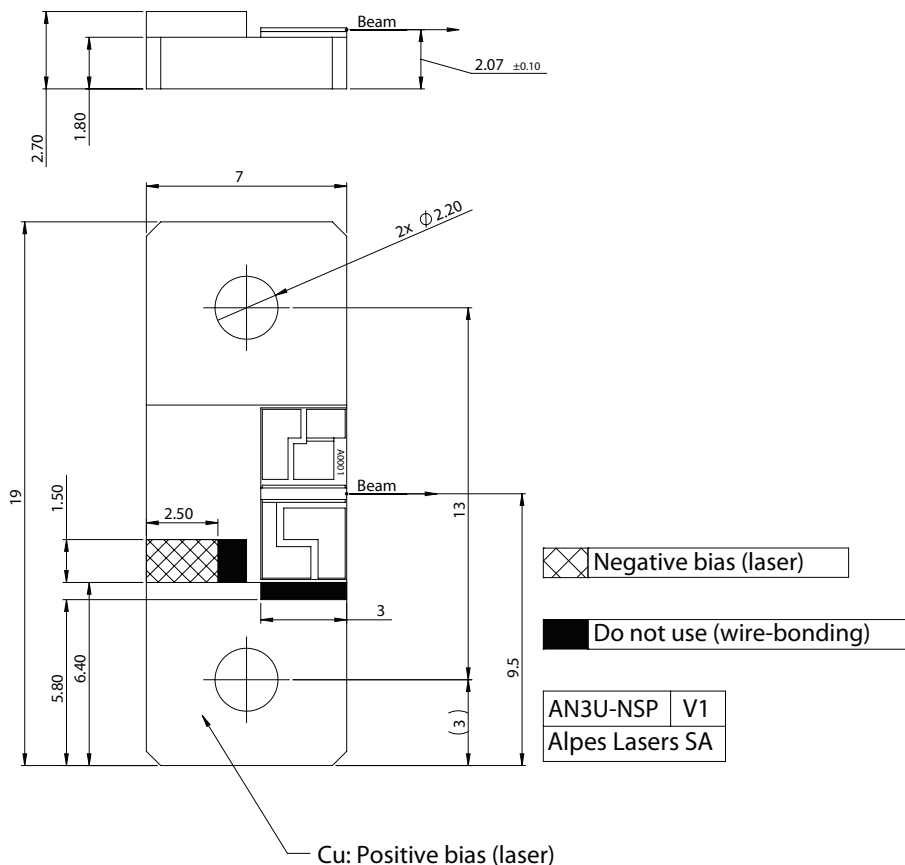


Figure 1: Mechanical and electrical interface for #sbcw22545 DN

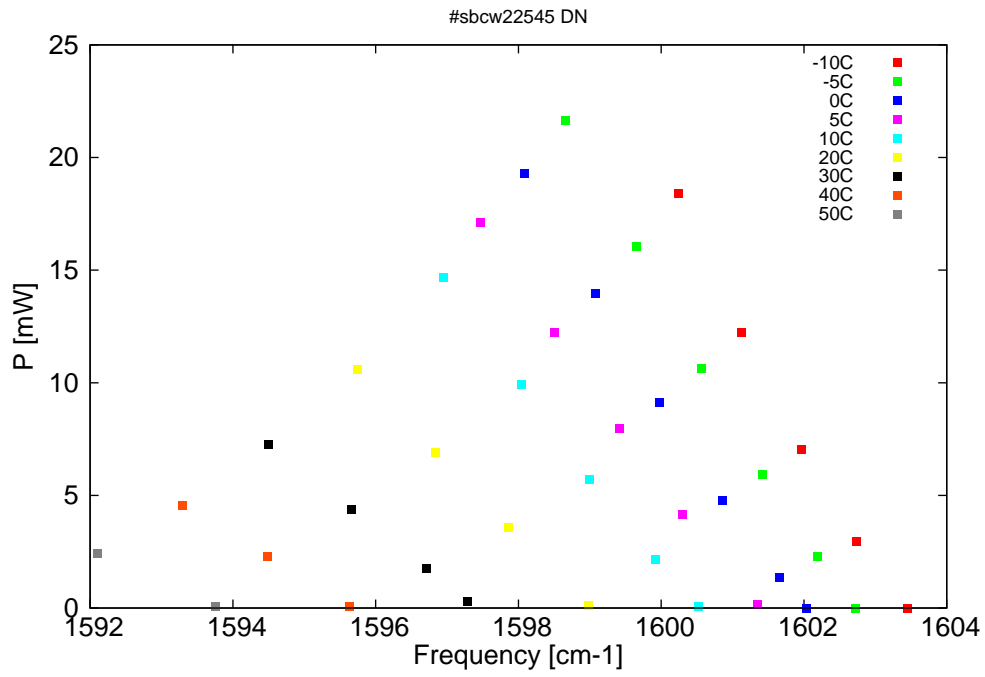


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

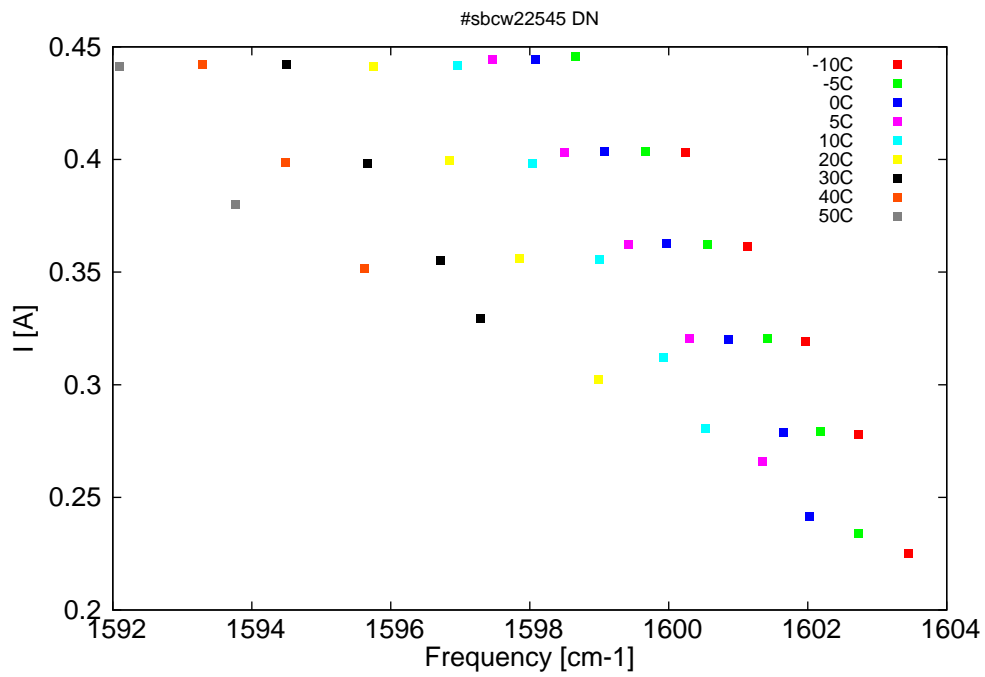


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6236.6	1603.4	0	-10	8.57	0.225
6239.3	1602.7	3	-10	8.86	0.278
6242.3	1602	7	-10	9.14	0.319
6245.6	1601.1	12.2	-10	9.43	0.361
6249.1	1600.2	18.4	-10	9.74	0.403
6239.4	1602.7	0	-5	8.61	0.234
6241.5	1602.2	2.3	-5	8.83	0.279
6244.5	1601.4	5.9	-5	9.12	0.32
6247.8	1600.6	10.6	-5	9.41	0.362
6251.3	1599.7	16	-5	9.71	0.404
6255.2	1598.7	21.6	-5	10.04	0.445
6242.1	1602	0	0	8.64	0.242
6243.5	1601.7	1.3	0	8.8	0.279
6246.6	1600.9	4.8	0	9.09	0.32
6250.1	1600	9.1	0	9.39	0.363
6253.6	1599.1	14	0	9.69	0.404
6257.5	1598.1	19.3	0	10	0.444
6244.7	1601.4	0.1	5	8.67	0.266
6248.8	1600.3	4.1	5	9.06	0.32
6252.3	1599.4	8	5	9.36	0.362
6255.9	1598.5	12.2	5	9.66	0.403
6259.9	1597.5	17.1	5	9.98	0.444
6248	1600.5	0.1	10	8.68	0.281
6250.3	1599.9	2.1	10	8.89	0.312
6253.9	1599	5.7	10	9.2	0.356
6257.7	1598	9.9	10	9.51	0.398
6261.9	1597	14.7	10	9.84	0.442
6254	1599	0.1	20	8.77	0.302
6258.4	1597.9	3.6	20	9.16	0.356
6262.4	1596.8	6.9	20	9.47	0.4
6266.6	1595.8	10.6	20	9.8	0.441
6260.6	1597.3	0.3	30	8.92	0.329
6262.9	1596.7	1.8	30	9.1	0.355
6267	1595.7	4.4	30	9.42	0.398
6271.5	1594.5	7.3	30	9.77	0.442
6267.1	1595.6	0.1	40	9.03	0.352
6271.6	1594.5	2.3	40	9.38	0.399
6276.3	1593.3	4.5	40	9.73	0.442
6274.5	1593.8	0.1	50	9.19	0.38
6281	1592.1	2.4	50	9.67	0.441

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

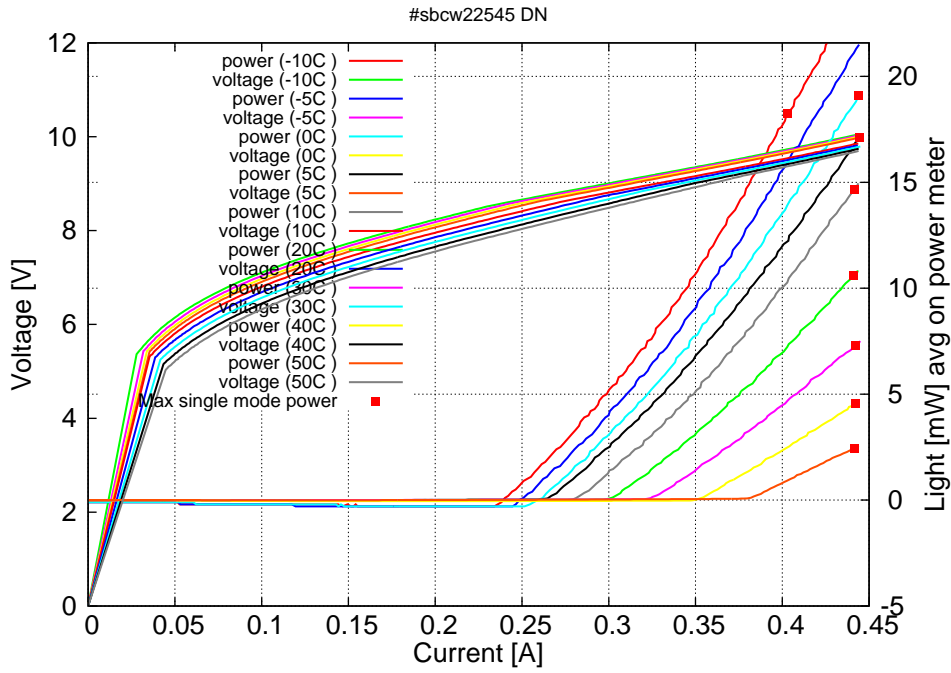


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

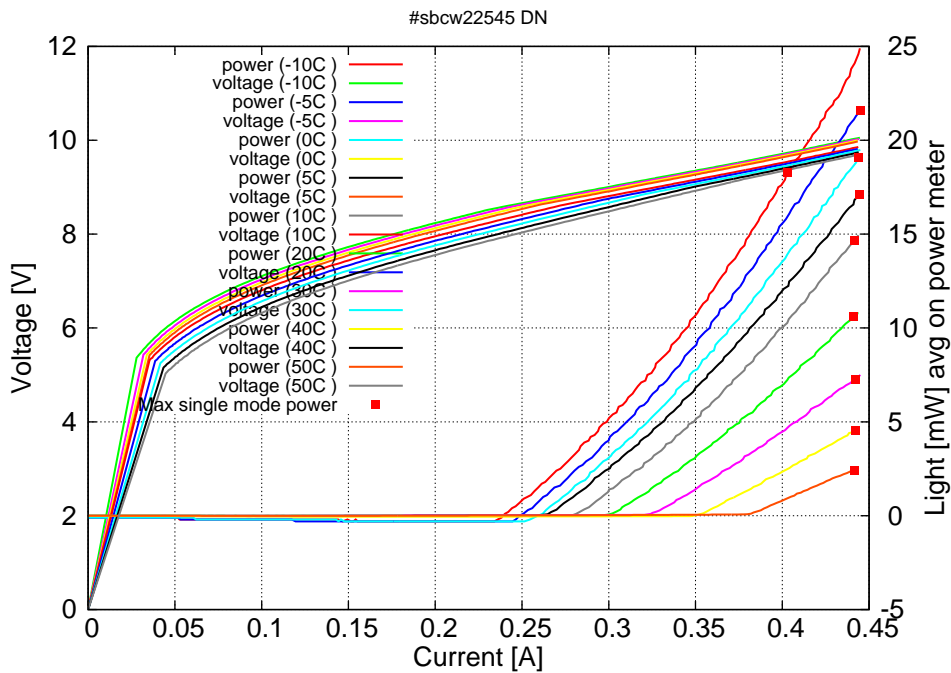


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -10C: $I_{th}=0.23A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.40A at -10C, 0.445A between -5C and 50C.

Figure 4: spectra at different temperatures for various DC currents

