

Datasheet for #sbcw22714 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 bias and positive bias on the specific zones drawn below. 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.

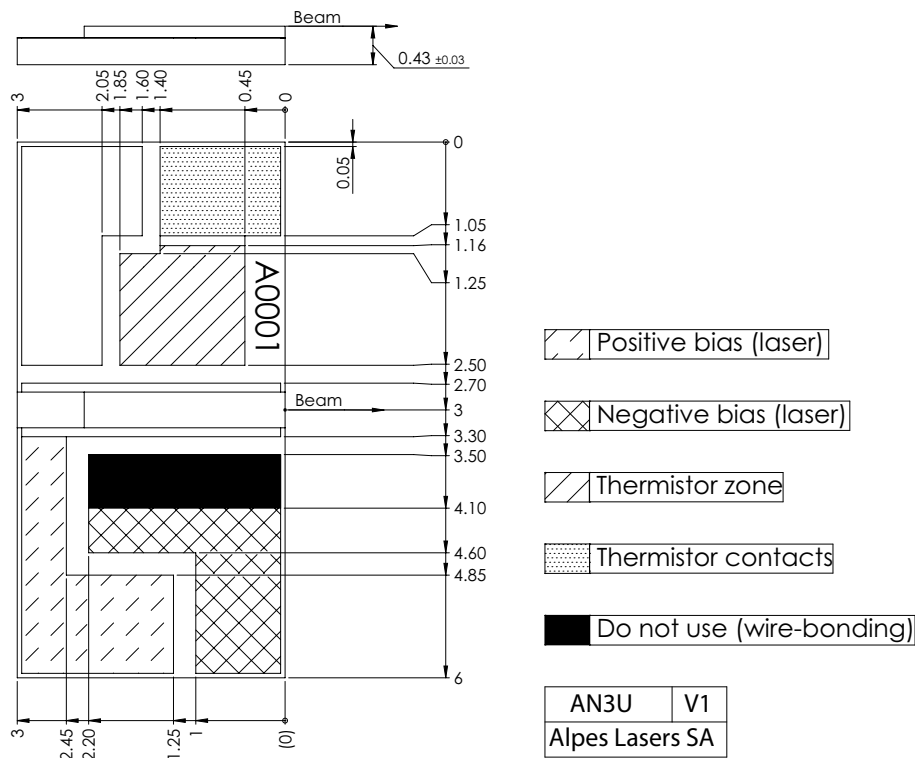


Figure 1: Mechanical and electrical interface for #sbcw22714 DN (please note that AlN submount numbering is A0Y2A)

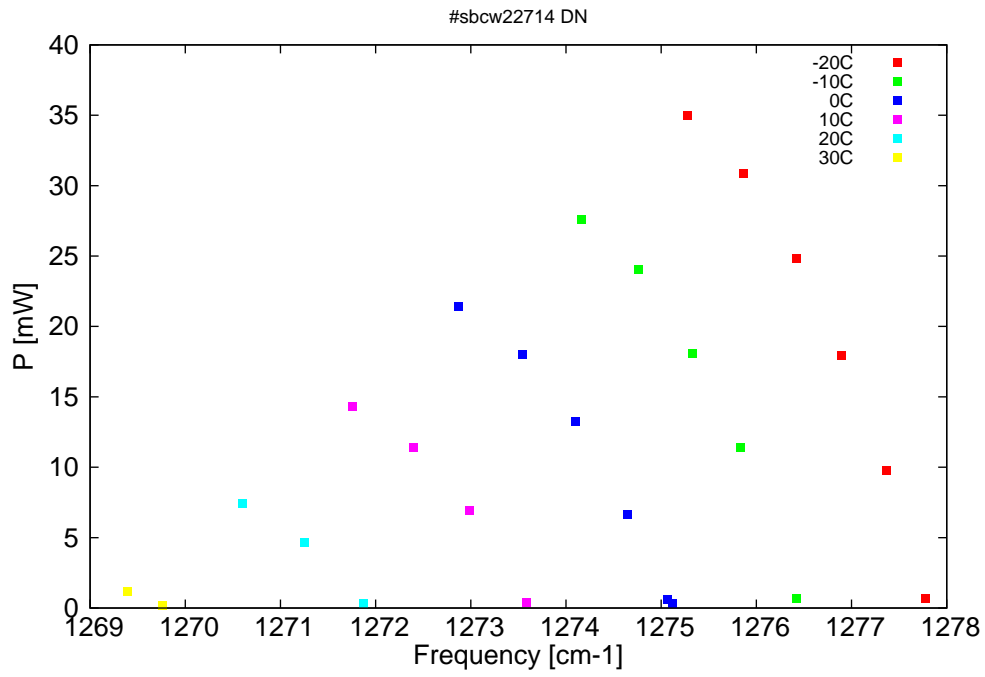


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

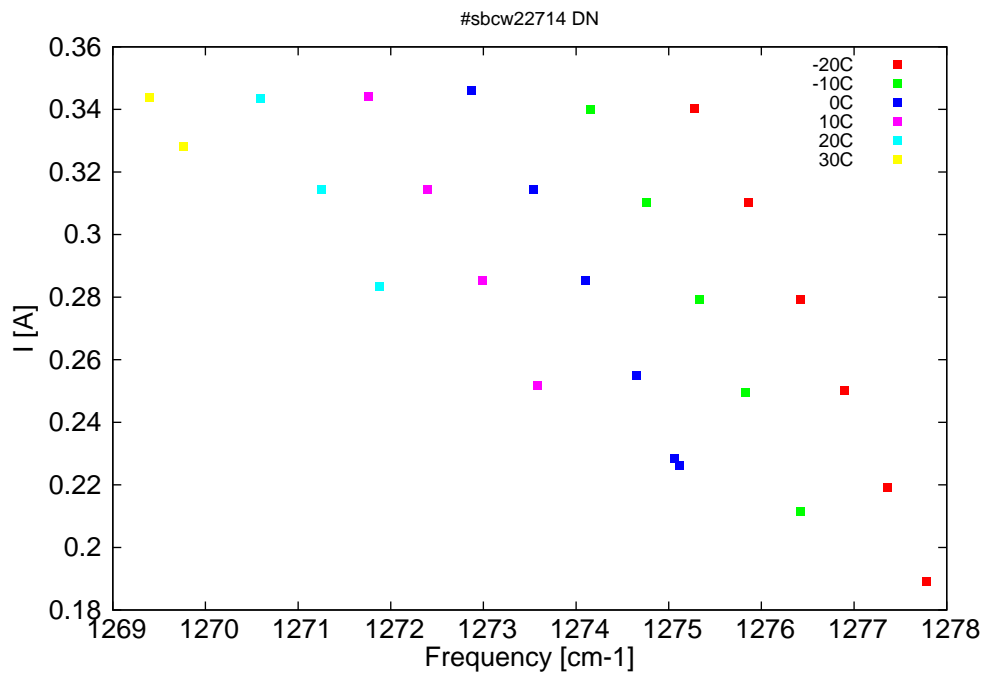


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7826.1	1277.8	0.6	-20	9.36	0.189
7828.6	1277.4	9.8	-20	9.6	0.219
7831.5	1276.9	18	-20	9.84	0.25
7834.4	1276.4	24.8	-20	10.06	0.279
7837.8	1275.9	30.9	-20	10.29	0.31
7841.5	1275.3	35	-20	10.51	0.34
7834.4	1276.4	0.7	-10	9.34	0.212
7838	1275.8	11.4	-10	9.65	0.25
7841.1	1275.3	18.1	-10	9.87	0.279
7844.6	1274.8	24	-10	10.11	0.31
7848.3	1274.2	27.6	-10	10.33	0.34
7842.4	1275.1	0.3	0	9.29	0.226
7842.7	1275.1	0.6	0	9.3	0.228
7845.3	1274.7	6.7	0	9.51	0.255
7848.7	1274.1	13.3	0	9.75	0.285
7852.1	1273.5	18	0	9.97	0.315
7856.3	1272.9	21.4	0	10.21	0.346
7851.8	1273.6	0.4	10	9.32	0.252
7855.5	1273	6.9	10	9.58	0.285
7859.2	1272.4	11.4	10	9.8	0.314
7863.1	1271.8	14.3	10	10.03	0.344
7862.4	1271.9	0.3	20	9.41	0.283
7866.2	1271.3	4.7	20	9.66	0.314
7870.3	1270.6	7.4	20	9.88	0.344
7875.5	1269.8	0.2	30	9.62	0.328
7877.8	1269.4	1.2	30	9.74	0.344

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

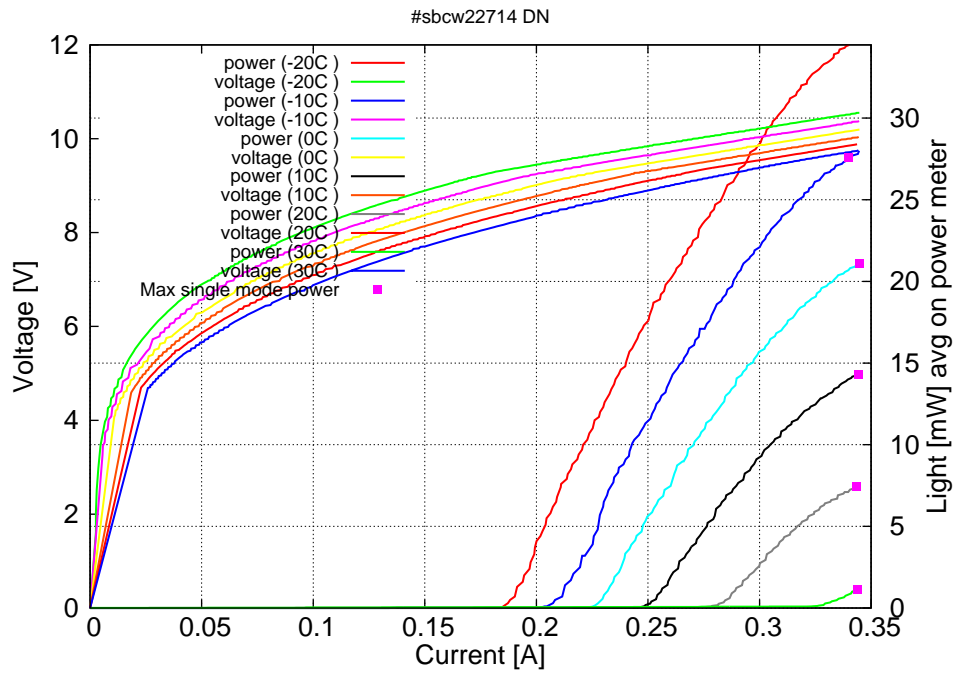


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=9.3V$ (2-wires measurements). Maximum operation current: 0.34A between -20C and -10C, 0.345A between 0C and 30C.

Figure 3: spectra at different temperatures for various DC currents

