

Datasheet for #sbcw27594 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 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.

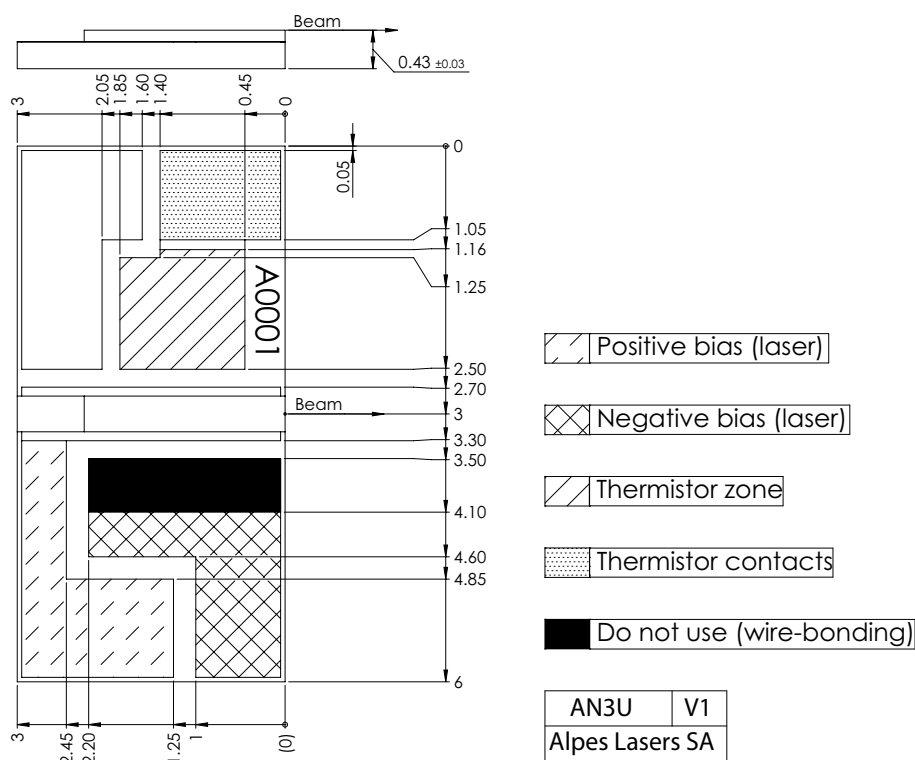


Figure 1: Mechanical and electrical interface for #sbcw27594 DN (please note that AlN submount numbering is A0Y48)

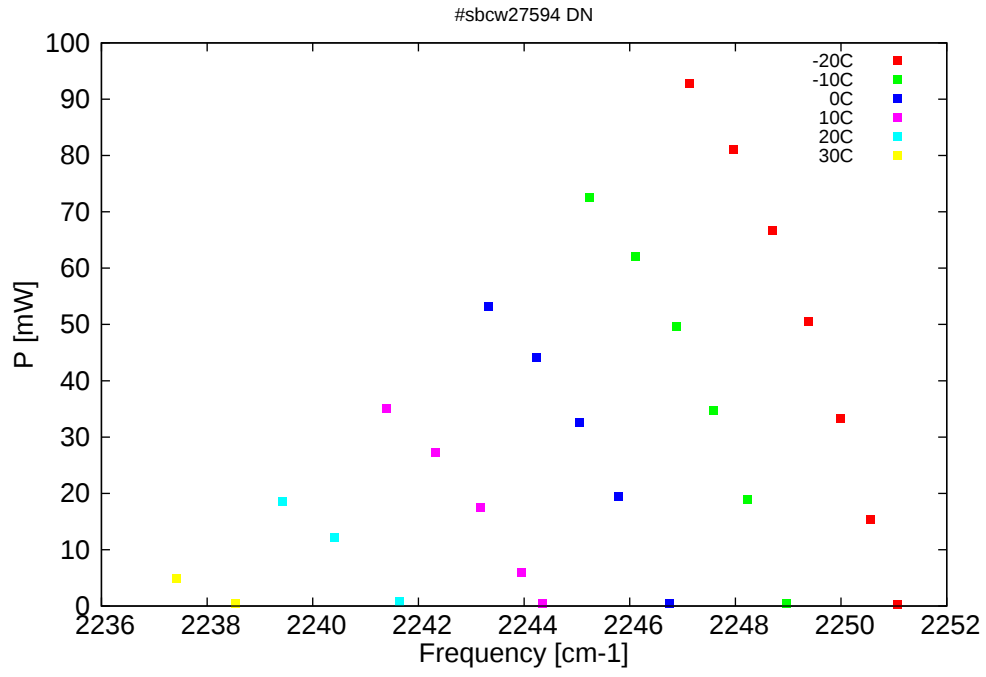


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

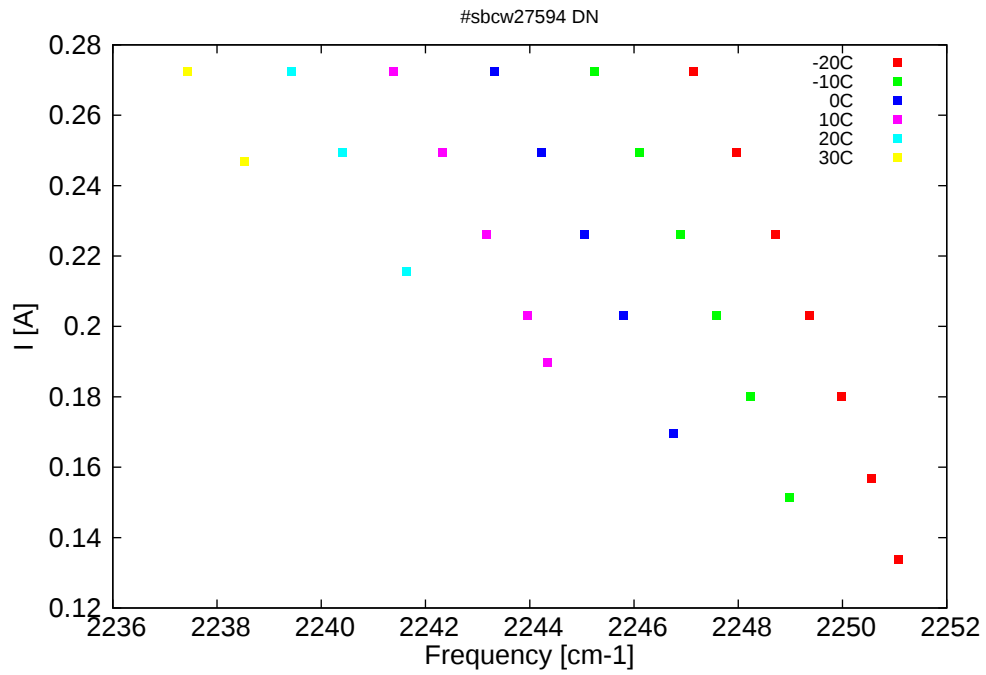


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
4442.3	2251.1	0.2	-20	8.61	0.134
4443.3	2250.6	15.3	-20	8.81	0.157
4444.5	2250	33.3	-20	9.01	0.18
4445.7	2249.4	50.5	-20	9.21	0.203
4447	2248.7	66.7	-20	9.41	0.226
4448.5	2248	81.1	-20	9.61	0.249
4450.1	2247.1	92.8	-20	9.82	0.272
4446.5	2249	0.5	-10	8.74	0.151
4447.9	2248.2	18.9	-10	8.98	0.18
4449.2	2247.6	34.7	-10	9.19	0.203
4450.6	2246.9	49.6	-10	9.39	0.226
4452.1	2246.1	62.2	-10	9.6	0.249
4453.9	2245.2	72.6	-10	9.82	0.272
4450.9	2246.8	0.5	0	8.87	0.17
4452.8	2245.8	19.4	0	9.16	0.203
4454.3	2245	32.6	0	9.37	0.226
4455.9	2244.2	44.1	0	9.58	0.249
4457.7	2243.3	53.3	0	9.8	0.272
4455.6	2244.3	0.5	10	9.03	0.19
4456.4	2244	5.9	10	9.14	0.203
4458	2243.2	17.5	10	9.35	0.226
4459.7	2242.3	27.3	10	9.57	0.249
4461.5	2241.4	35.1	10	9.79	0.272
4461	2241.6	0.7	20	9.25	0.216
4463.5	2240.4	12.2	20	9.56	0.249
4465.4	2239.4	18.6	20	9.78	0.272
4467.2	2238.5	0.4	30	9.54	0.247
4469.4	2237.4	4.9	30	9.78	0.272

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

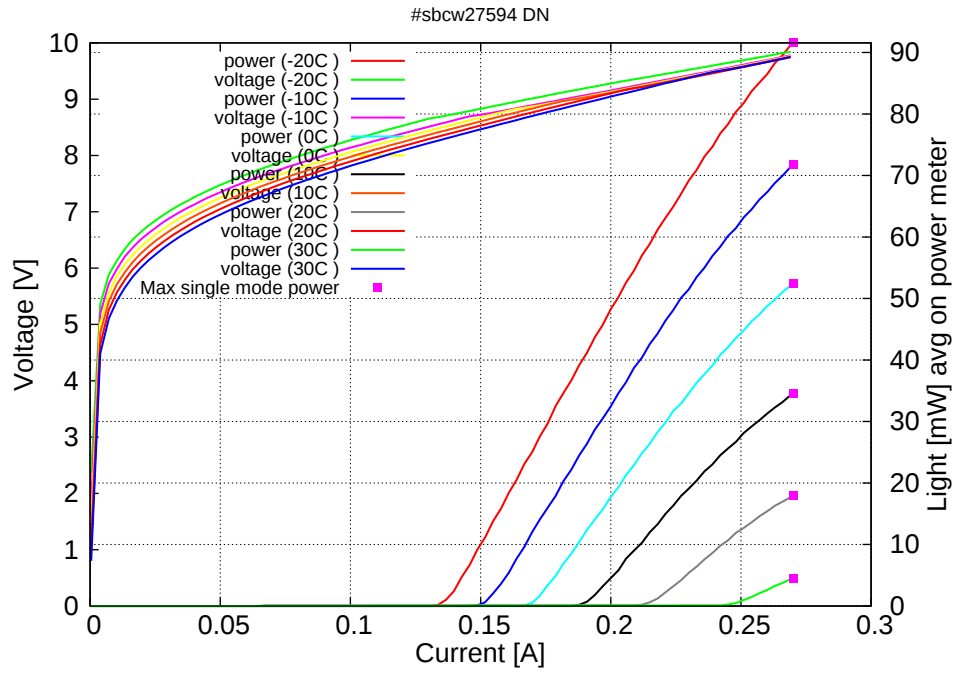


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

