

Datasheet for #sbcw24954 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.

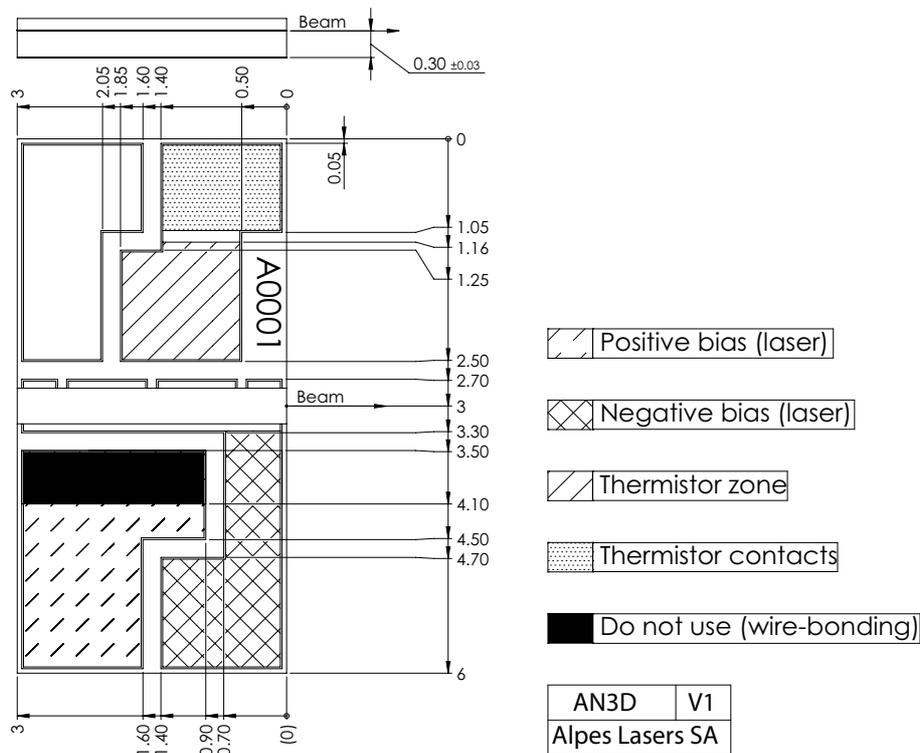


Figure 1: Mechanical and electrical interface for #sbcw24954 DN (please note that AlN submount numbering is P3789)

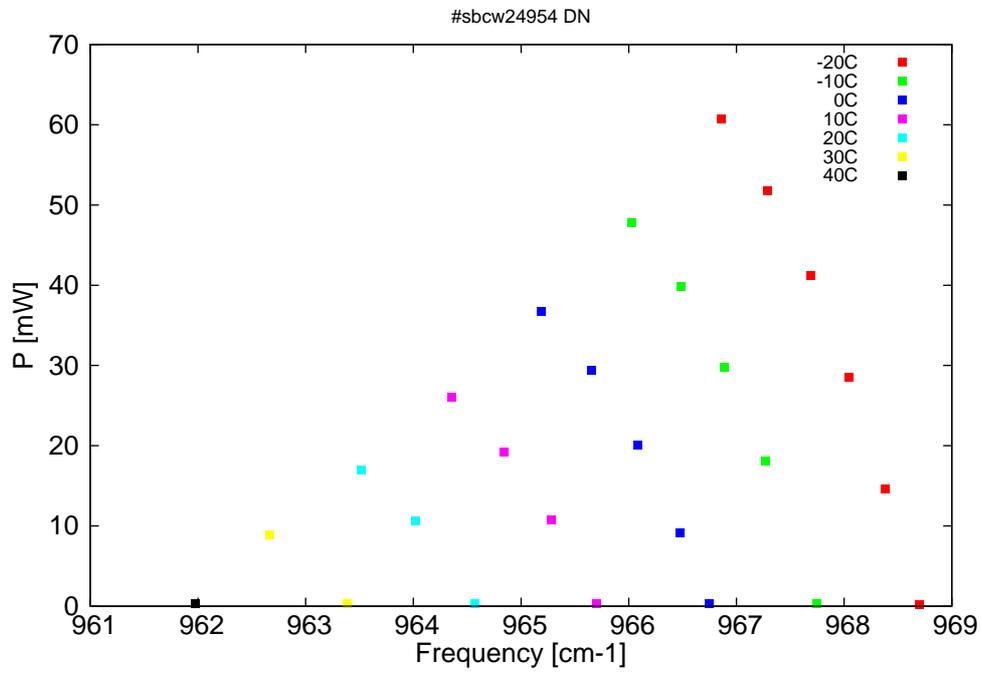


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

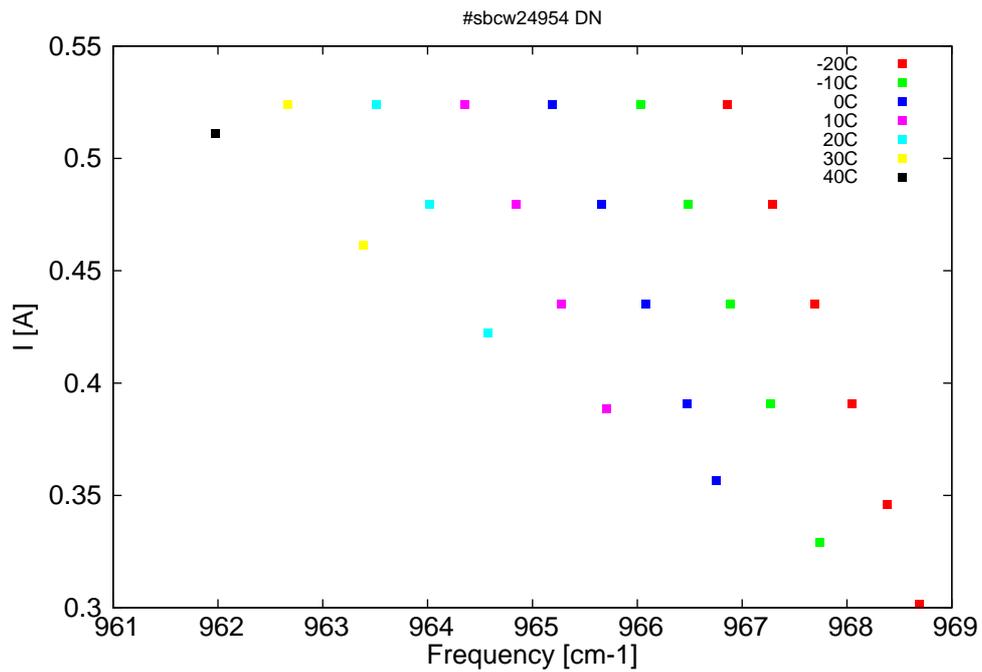


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10323.2	968.7	0.2	-20	8.05	0.302
10326.5	968.4	14.7	-20	8.29	0.346
10330	968	28.6	-20	8.55	0.391
10333.9	967.7	41.2	-20	8.81	0.435
10338.1	967.3	51.8	-20	9.08	0.48
10342.8	966.9	60.7	-20	9.37	0.524
10333.3	967.7	0.3	-10	8.16	0.329
10338.4	967.3	18.1	-10	8.51	0.391
10342.4	966.9	29.8	-10	8.79	0.435
10346.8	966.5	39.8	-10	9.07	0.48
10351.6	966	47.8	-10	9.37	0.524
10343.9	966.8	0.3	0	8.3	0.357
10346.9	966.5	9.2	0	8.5	0.391
10351.1	966.1	20	0	8.78	0.435
10355.6	965.7	29.4	0	9.07	0.48
10360.7	965.2	36.7	0	9.38	0.524
10355.1	965.7	0.3	10	8.48	0.389
10359.7	965.3	10.7	10	8.78	0.435
10364.4	964.8	19.2	10	9.07	0.48
10369.6	964.4	26	10	9.39	0.524
10367.3	964.6	0.3	20	8.68	0.422
10373.2	964	10.6	20	9.06	0.48
10378.7	963.5	16.9	20	9.38	0.524
10380.1	963.4	0.3	30	8.94	0.462
10387.8	962.7	8.9	30	9.39	0.524
10395.3	962	0.3	40	9.29	0.511

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

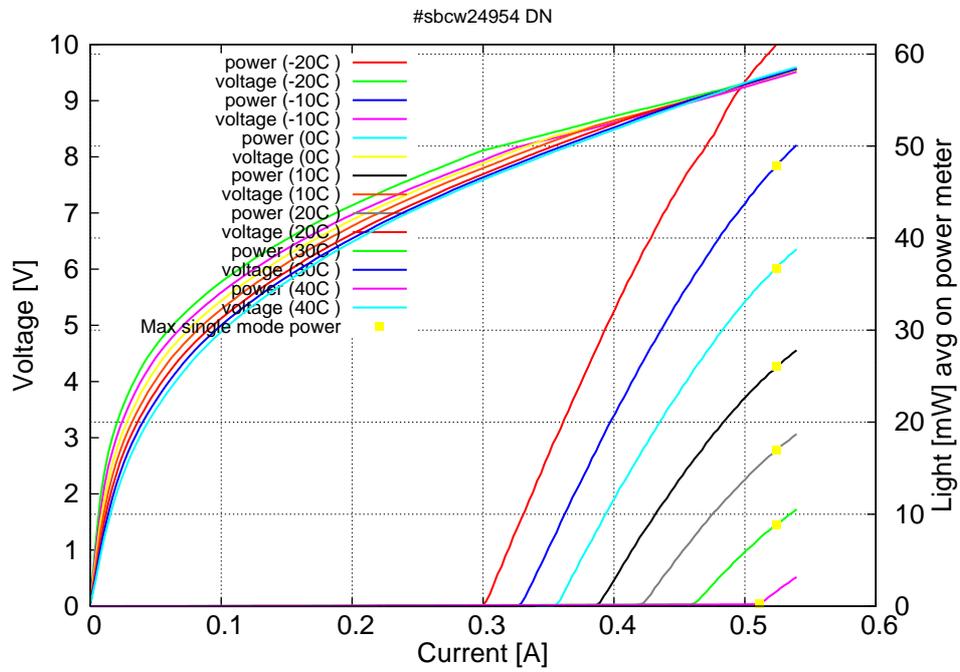


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.30A$ / $V_{th}=8.05V$ (2-wires measurements). Maximum operation current: 0.540A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

