

Datasheet for #sbcw24290 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.

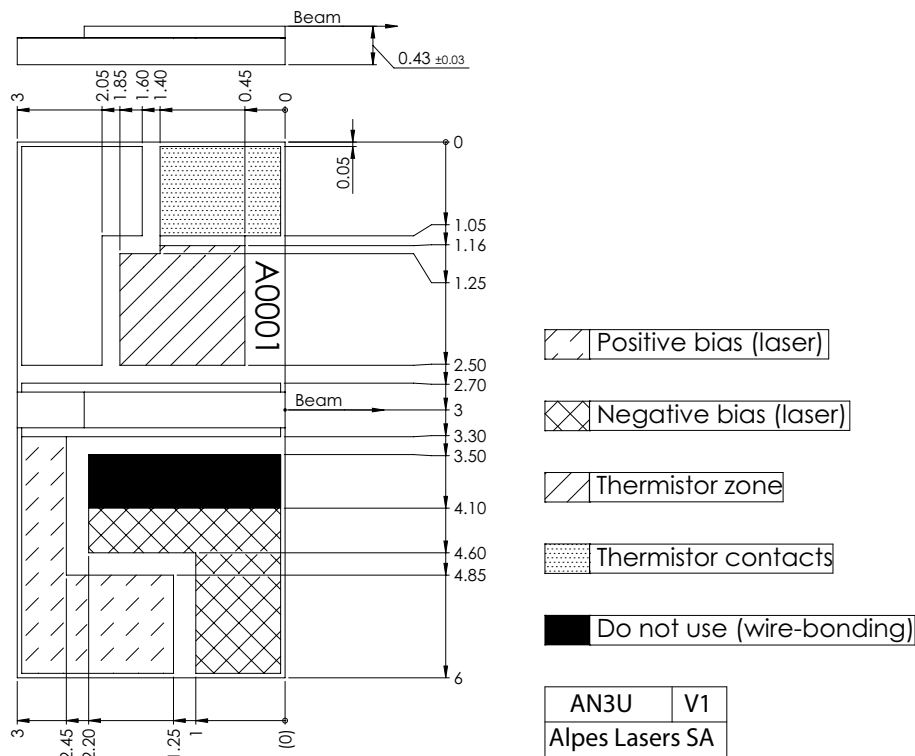


Figure 1: Mechanical and electrical interface for #sbcw24290 DN (please note that AlN submount numbering is A10UU)

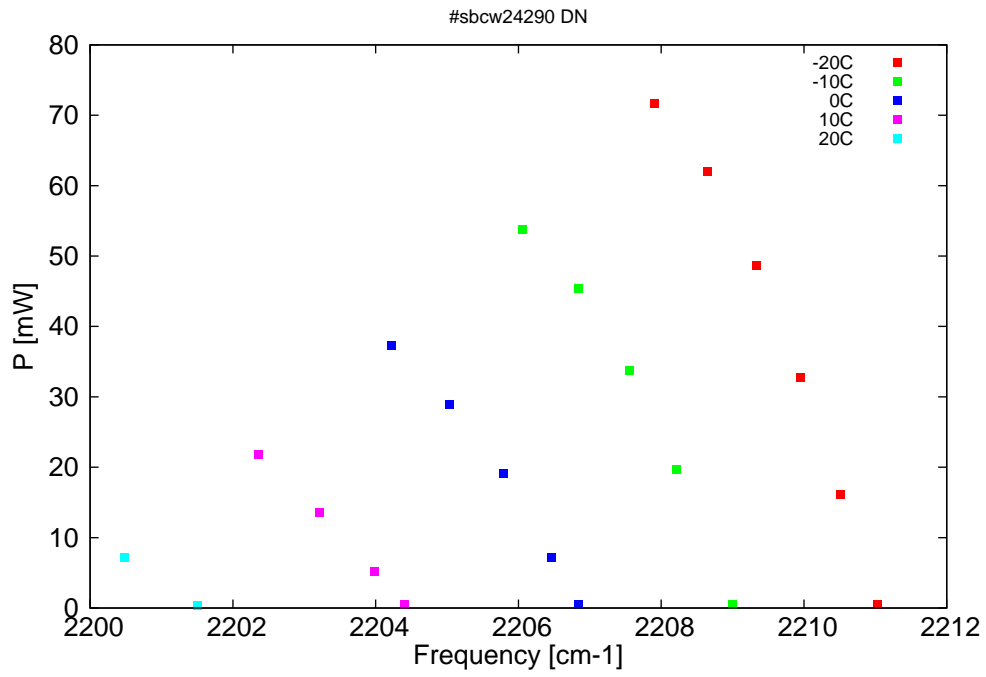


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

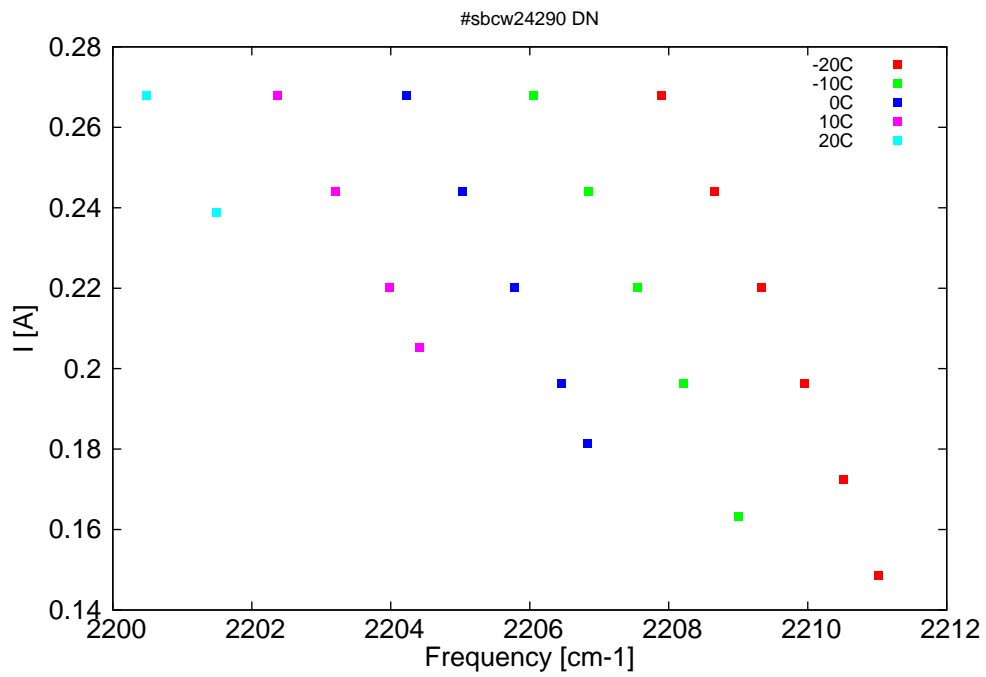


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4522.8	2211	0.5	-20	8.77	0.149
4523.8	2210.5	16.2	-20	8.96	0.173
4525	2210	32.8	-20	9.15	0.196
4526.2	2209.3	48.6	-20	9.35	0.22
4527.6	2208.7	62	-20	9.55	0.244
4529.2	2207.9	71.6	-20	9.76	0.268
4526.9	2209	0.5	-10	8.85	0.163
4528.6	2208.2	19.7	-10	9.12	0.196
4529.9	2207.6	33.7	-10	9.32	0.22
4531.4	2206.8	45.3	-10	9.53	0.244
4533	2206.1	53.7	-10	9.74	0.268
4531.4	2206.8	0.6	0	8.97	0.182
4532.1	2206.5	7.2	0	9.09	0.196
4533.5	2205.8	19.1	0	9.3	0.22
4535.1	2205	28.9	0	9.5	0.244
4536.8	2204.2	37.2	0	9.72	0.268
4536.4	2204.4	0.5	10	9.15	0.205
4537.2	2204	5.3	10	9.28	0.22
4538.8	2203.2	13.6	10	9.48	0.244
4540.6	2202.4	21.8	10	9.7	0.268
4542.4	2201.5	0.3	20	9.44	0.239
4544.5	2200.5	7.2	20	9.68	0.268

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

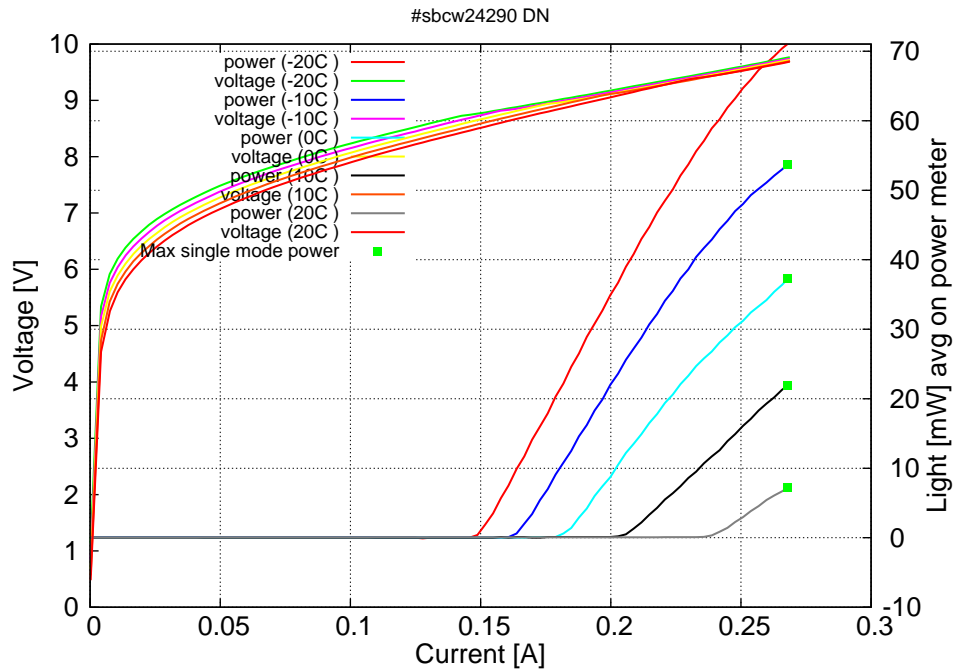


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

