

Datasheet for #sbcw19556 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.

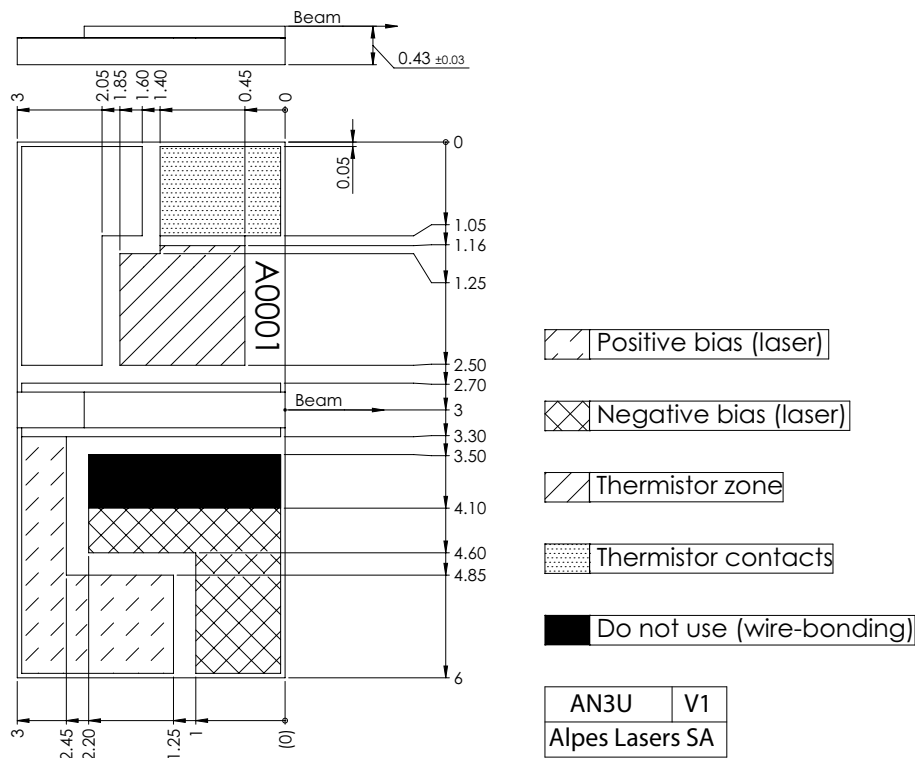


Figure 1: Mechanical and electrical interface for #sbcw19556 DN (please note that AlN submount numbering is A0RUZ)

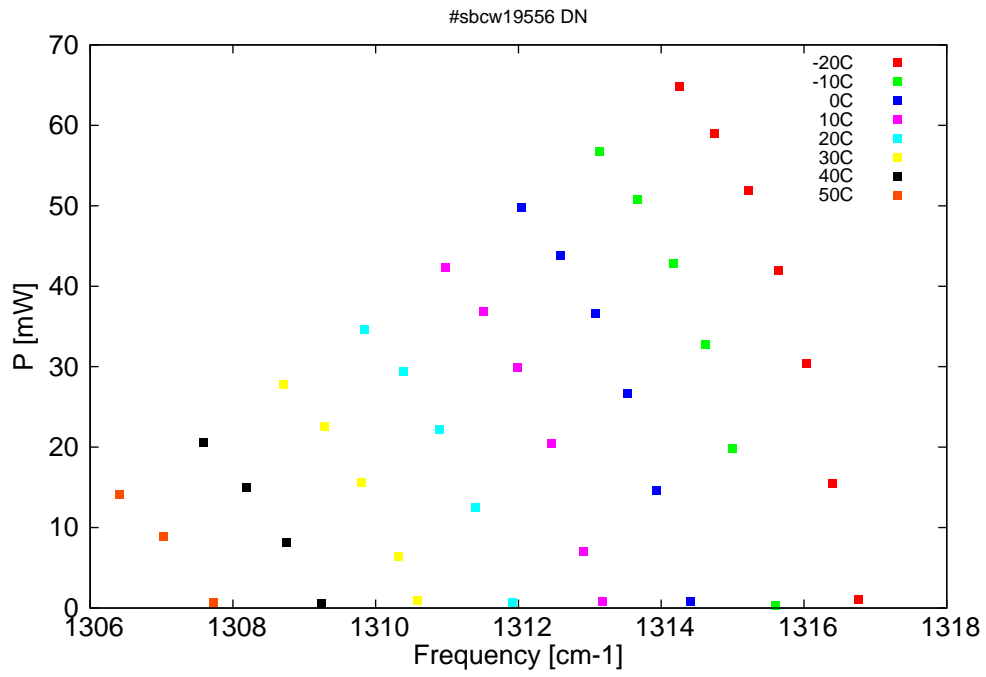


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

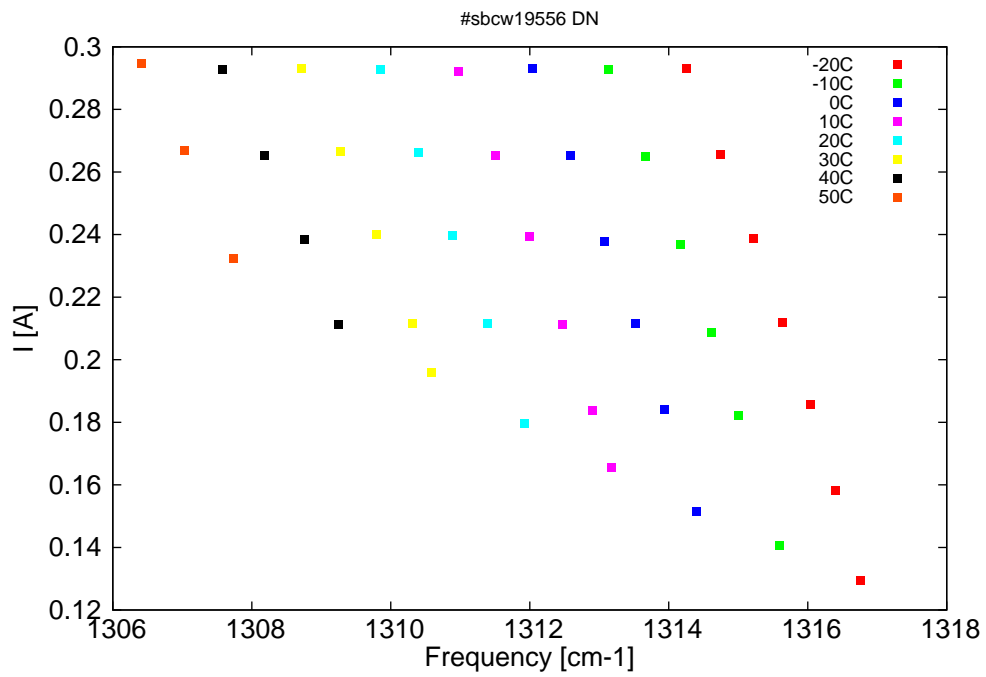


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7594.4	1316.8	1.1	-20	8	0.13
7596.5	1316.4	15.5	-20	8.28	0.158
7598.6	1316	30.3	-20	8.55	0.186
7600.9	1315.6	42	-20	8.8	0.212
7603.3	1315.2	51.9	-20	9.06	0.239
7606	1314.8	59	-20	9.31	0.266
7608.9	1314.3	64.8	-20	9.57	0.293
7601.1	1315.6	0.3	-10	8.02	0.141
7604.5	1315	19.8	-10	8.43	0.182
7606.8	1314.6	32.7	-10	8.68	0.209
7609.4	1314.2	42.9	-10	8.94	0.237
7612.3	1313.7	50.8	-10	9.21	0.265
7615.3	1313.1	56.8	-10	9.46	0.293
7608	1314.4	0.9	0	8.04	0.152
7610.7	1313.9	14.6	0	8.35	0.184
7613.1	1313.5	26.7	0	8.61	0.212
7615.7	1313.1	36.6	0	8.85	0.238
7618.6	1312.6	43.8	0	9.11	0.265
7621.7	1312	49.7	0	9.36	0.293
7615.2	1313.2	0.9	10	8.09	0.166
7616.7	1312.9	7	10	8.26	0.184
7619.2	1312.5	20.5	10	8.51	0.211
7622	1312	29.9	10	8.76	0.239
7624.8	1311.5	36.8	10	9	0.265
7627.9	1311	42.3	10	9.25	0.292
7622.4	1311.9	0.7	20	8.14	0.18
7625.5	1311.4	12.5	20	8.43	0.211
7628.4	1310.9	22.2	20	8.68	0.24
7631.3	1310.4	29.4	20	8.92	0.266
7634.5	1309.8	34.7	20	9.16	0.293
7630.2	1310.6	1	30	8.21	0.196
7631.8	1310.3	6.4	30	8.34	0.211
7634.7	1309.8	15.6	30	8.6	0.24
7637.8	1309.3	22.5	30	8.84	0.266
7641.1	1308.7	27.7	30	9.08	0.293
7638	1309.2	0.6	40	8.27	0.211
7640.9	1308.8	8.2	40	8.51	0.238
7644.2	1308.2	15	40	8.75	0.265
7647.7	1307.6	20.5	40	8.99	0.293
7646.8	1307.7	0.7	50	8.38	0.232
7651	1307	8.9	50	8.68	0.267
7654.6	1306.4	14.1	50	8.92	0.295

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

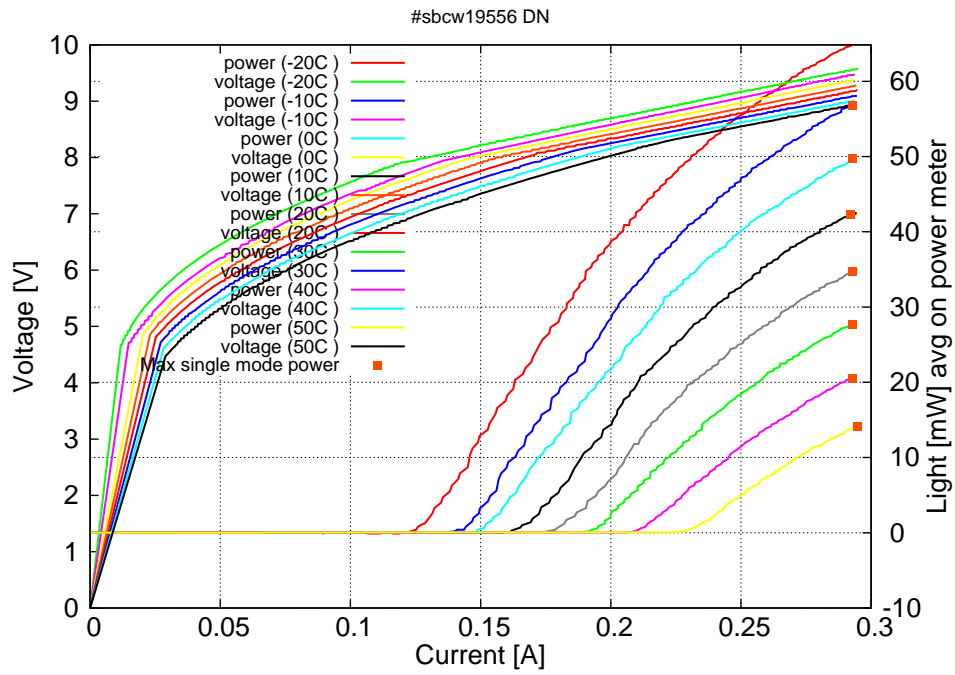


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=8.0V$ (2-wires measurements). Maximum operation current: 0.295A for all temperatures.

