

Datasheet for #sbcw23893 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 #sbcw23893 DN (please note that AlN submount numbering is A0Z5E)

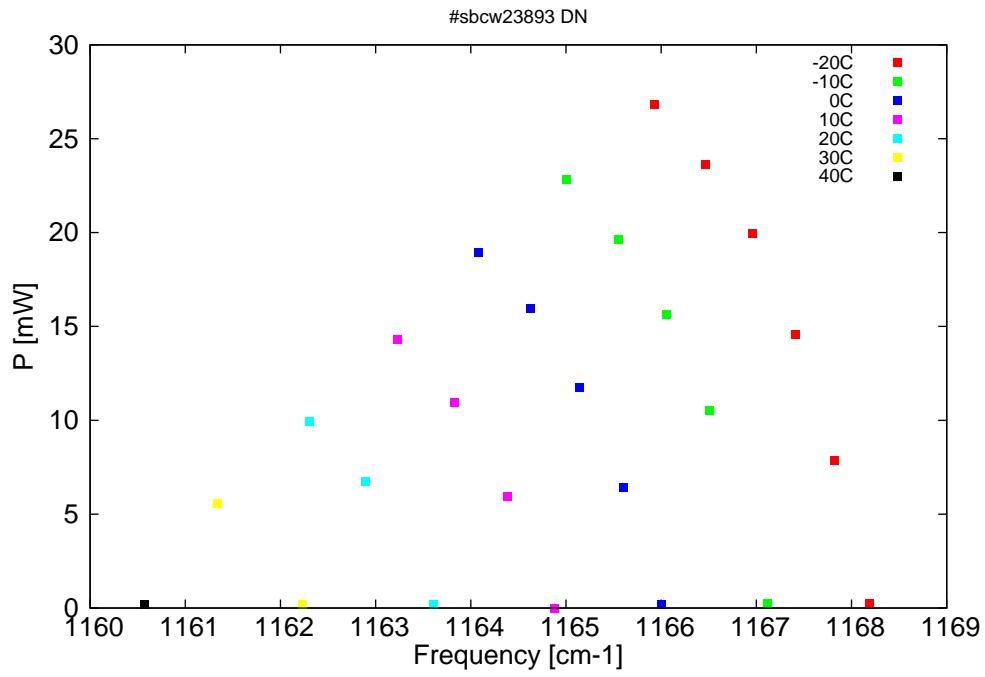


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

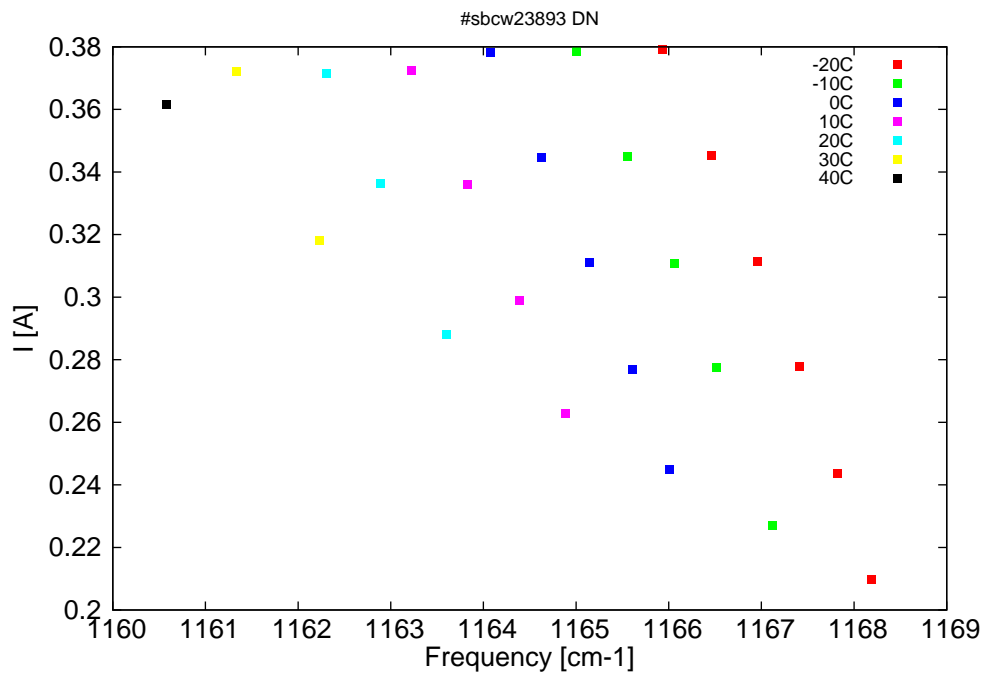


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8560.2	1168.2	0.2	-20	9.06	0.21
8563	1167.8	7.9	-20	9.48	0.244
8566	1167.4	14.6	-20	9.89	0.278
8569.3	1167	20	-20	10.3	0.311
8572.9	1166.5	23.6	-20	10.7	0.345
8576.9	1165.9	26.8	-20	11.09	0.379
8568.1	1167.1	0.2	-10	9.09	0.227
8572.6	1166.5	10.5	-10	9.69	0.277
8575.9	1166.1	15.6	-10	10.08	0.311
8579.6	1165.6	19.6	-10	10.46	0.345
8583.7	1165	22.8	-10	10.84	0.379
8576.3	1166	0.2	0	9.14	0.245
8579.2	1165.6	6.4	0	9.5	0.277
8582.7	1165.1	11.8	0	9.88	0.311
8586.4	1164.6	16	0	10.25	0.345
8590.5	1164.1	18.9	0	10.61	0.378
8584.6	1164.9	0	10	9.18	0.263
8588.2	1164.4	5.9	10	9.57	0.299
8592.3	1163.8	11	10	9.97	0.336
8596.8	1163.2	14.3	10	10.35	0.372
8594	1163.6	0.2	20	9.29	0.288
8599.2	1162.9	6.7	20	9.79	0.336
8603.6	1162.3	9.9	20	10.15	0.372
8604.1	1162.2	0.2	30	9.44	0.318
8610.7	1161.3	5.6	30	9.98	0.372
8616.4	1160.6	0.2	40	9.71	0.362

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

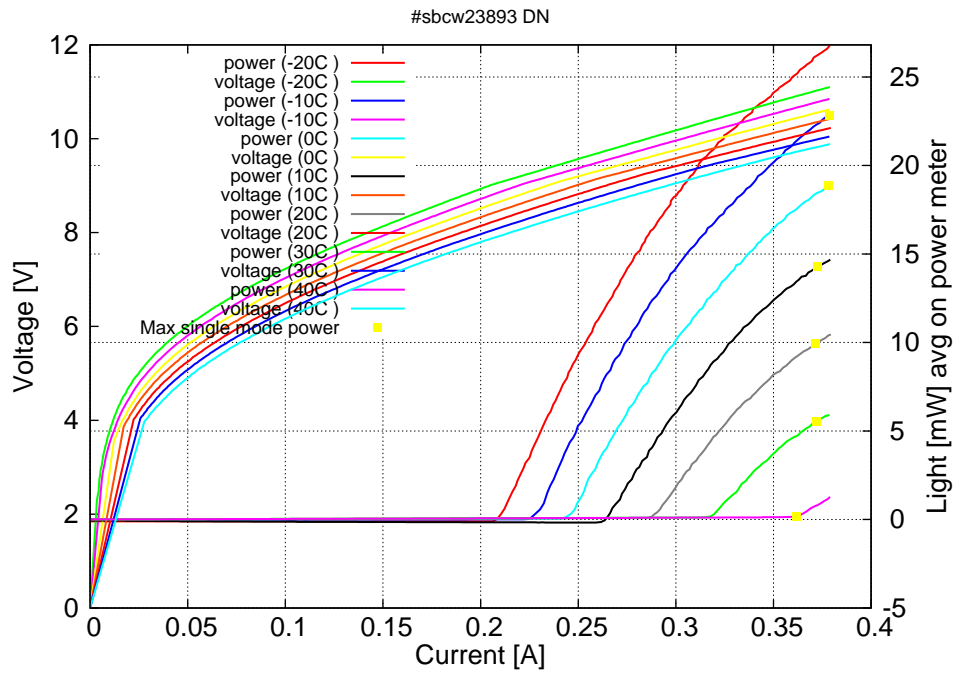


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=9.0V$ (2-wires measurements). Maximum operation current: 0.38A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

