

Datasheet for #sbcw24953 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 #sbcw24953 DN (please note that AlN submount numbering is A1223)

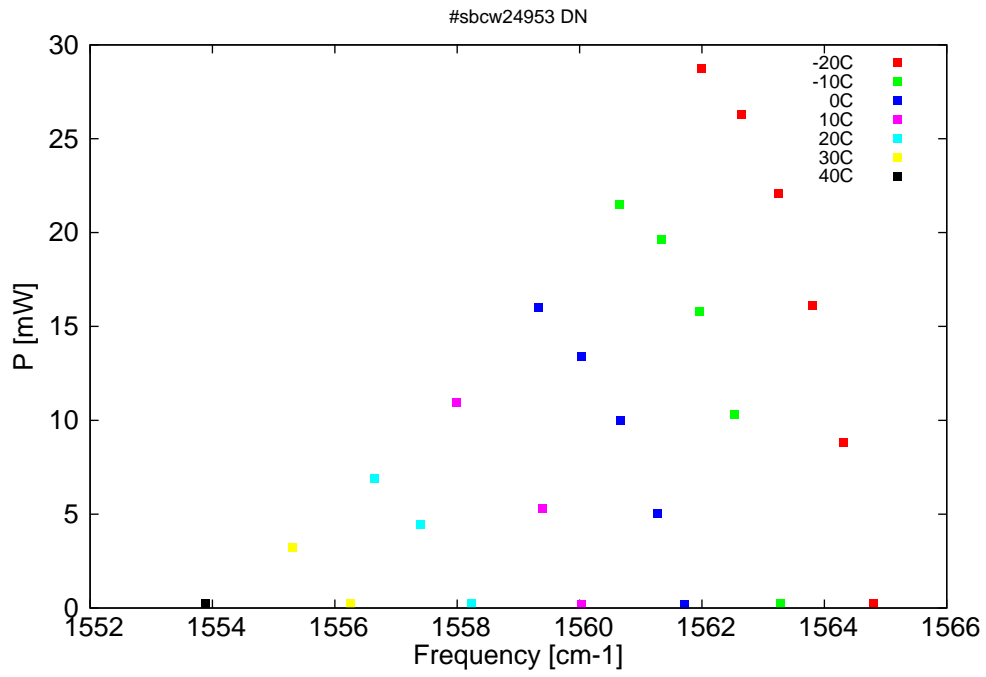


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

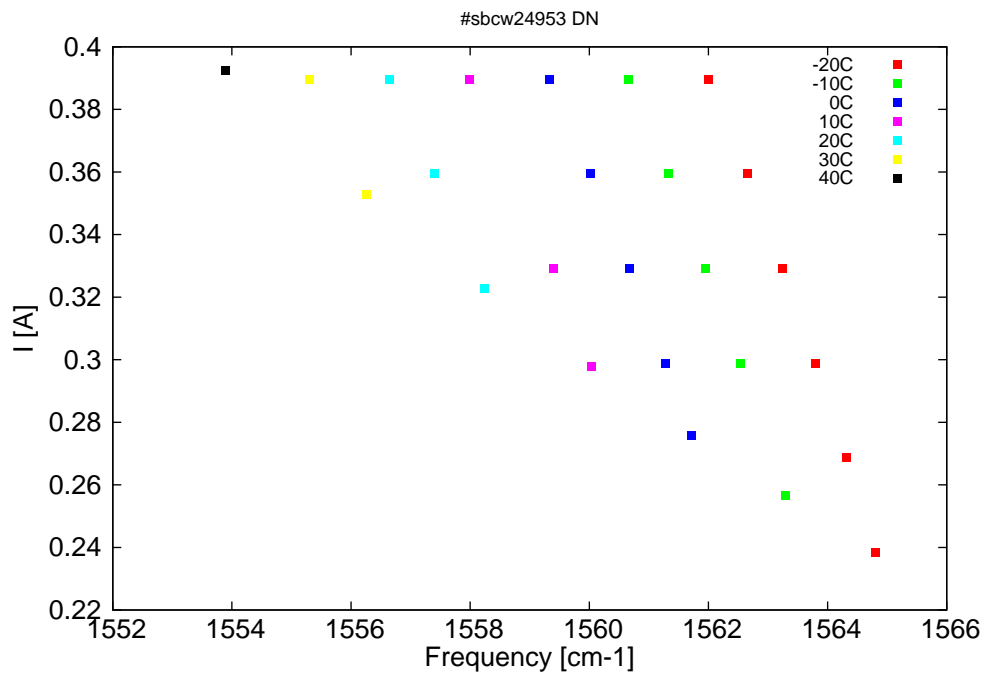


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6390.6	1564.8	0.2	-20	9.07	0.238
6392.6	1564.3	8.8	-20	9.3	0.269
6394.7	1563.8	16.1	-20	9.52	0.299
6396.9	1563.3	22.1	-20	9.74	0.329
6399.4	1562.6	26.3	-20	9.97	0.36
6402.1	1562	28.8	-20	10.2	0.39
6396.8	1563.3	0.3	-10	9.12	0.257
6399.8	1562.5	10.3	-10	9.44	0.299
6402.2	1562	15.8	-10	9.66	0.329
6404.8	1561.3	19.6	-10	9.89	0.36
6407.6	1560.7	21.5	-10	10.13	0.39
6403.2	1561.7	0.2	0	9.19	0.276
6405	1561.3	5	0	9.37	0.299
6407.5	1560.7	10	0	9.6	0.329
6410.2	1560	13.4	0	9.83	0.36
6413	1559.3	16	0	10.08	0.39
6410.1	1560	0.2	10	9.29	0.298
6412.8	1559.4	5.3	10	9.53	0.329
6418.5	1558	11	10	10.02	0.39
6417.5	1558.2	0.3	20	9.42	0.323
6420.9	1557.4	4.4	20	9.72	0.36
6424.1	1556.6	6.9	20	9.97	0.39
6425.7	1556.3	0.2	30	9.63	0.353
6429.6	1555.3	3.2	30	9.94	0.39
6435.5	1553.9	0.2	40	9.92	0.393

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

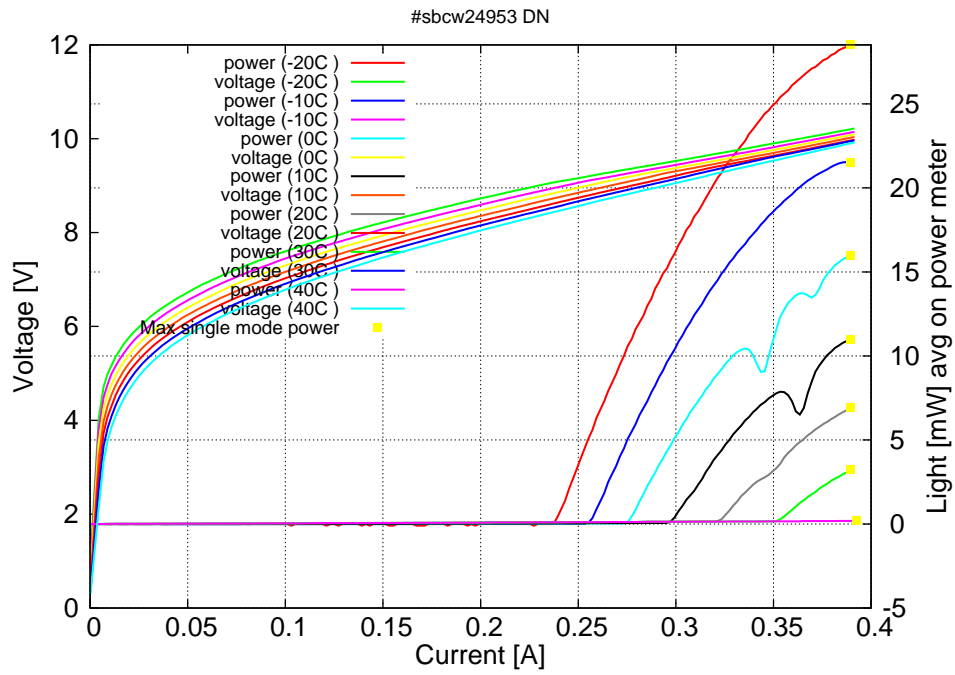


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.23A$ / $V_{th}=9.0V$ (2-wires measurements). Maximum operation current: 0.393A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

