

Datasheet for #sbcw27339 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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 #sbcw27339 DN (please note that AlN submount numbering is A0Y9F)

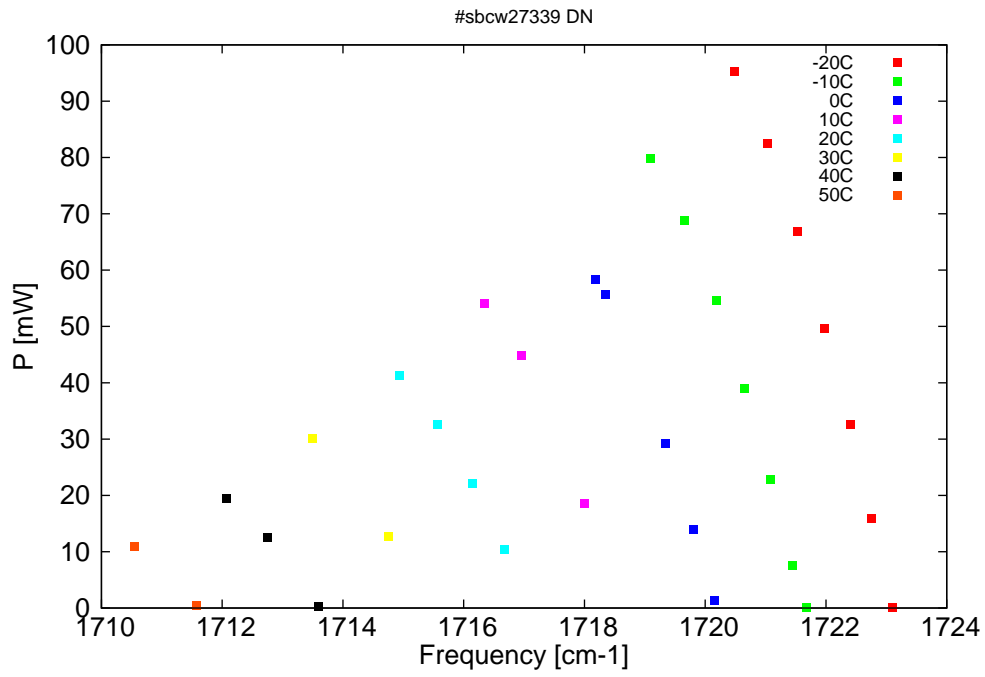


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

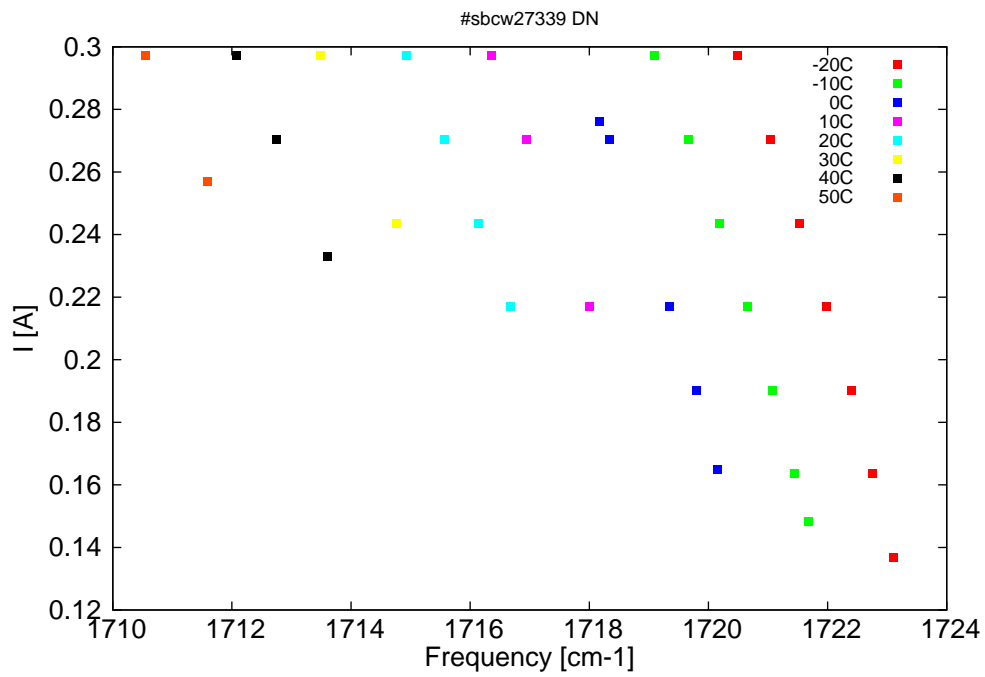


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5803.5	1723.1	0.2	-20	7.41	0.137
5804.6	1722.8	15.9	-20	7.68	0.164
5805.9	1722.4	32.5	-20	7.94	0.19
5807.3	1722	49.6	-20	8.2	0.217
5808.8	1721.5	66.8	-20	8.48	0.244
5810.5	1721	82.5	-20	8.77	0.27
5812.3	1720.5	95.3	-20	9.09	0.297
5808.3	1721.7	0.1	-10	7.47	0.148
5809.1	1721.5	7.5	-10	7.62	0.164
5810.3	1721.1	22.8	-10	7.88	0.19
5811.8	1720.6	39	-10	8.15	0.217
5813.3	1720.2	54.7	-10	8.42	0.244
5815.1	1719.7	68.8	-10	8.72	0.27
5817	1719.1	79.9	-10	9.03	0.297
5813.4	1720.2	1.3	0	7.61	0.165
5814.6	1719.8	13.9	0	7.83	0.19
5816.2	1719.3	29.3	0	8.1	0.217
5819.6	1718.3	55.7	0	8.66	0.27
5820.1	1718.2	58.3	0	8.77	0.276
5820.7	1718	18.5	10	8.05	0.217
5824.3	1717	44.8	10	8.61	0.27
5826.3	1716.4	54	10	8.92	0.297
5825.2	1716.7	10.4	20	8.02	0.217
5827	1716.1	22.1	20	8.29	0.244
5829	1715.6	32.6	20	8.58	0.27
5831.1	1714.9	41.3	20	8.89	0.297
5831.7	1714.8	12.8	30	8.26	0.244
5836	1713.5	30.2	30	8.85	0.297
5835.7	1713.6	0.2	40	8.08	0.233
5838.5	1712.8	12.5	40	8.47	0.27
5840.9	1712.1	19.5	40	8.77	0.297
5842.5	1711.6	0.5	50	8.32	0.257
5846.1	1710.6	10.9	50	8.73	0.297

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

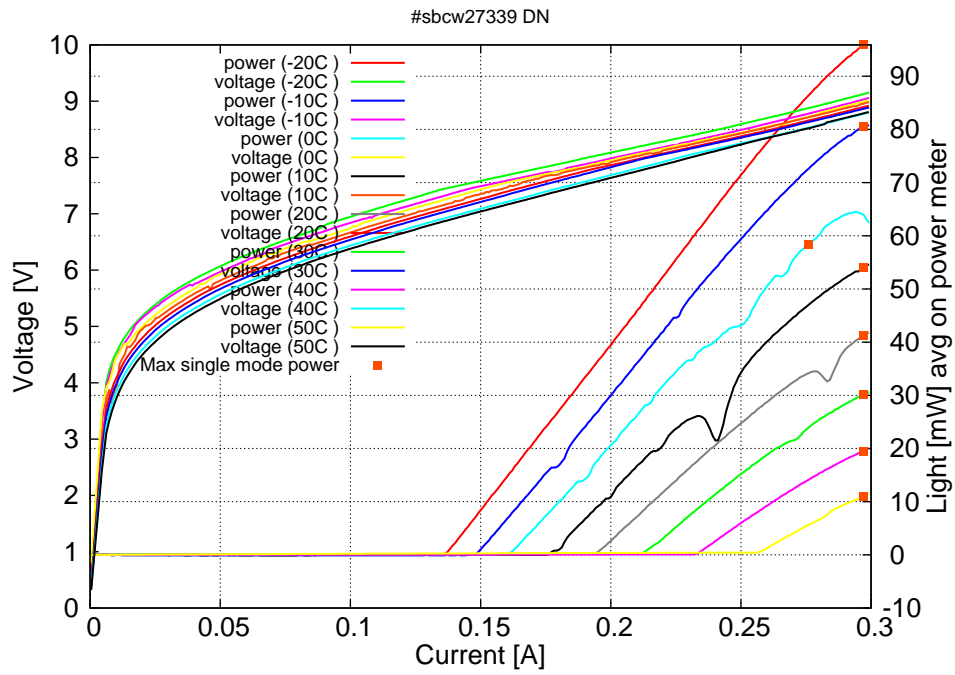


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=7.4V$ (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

