

Datasheet for #sbcw16561 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw16561 DN

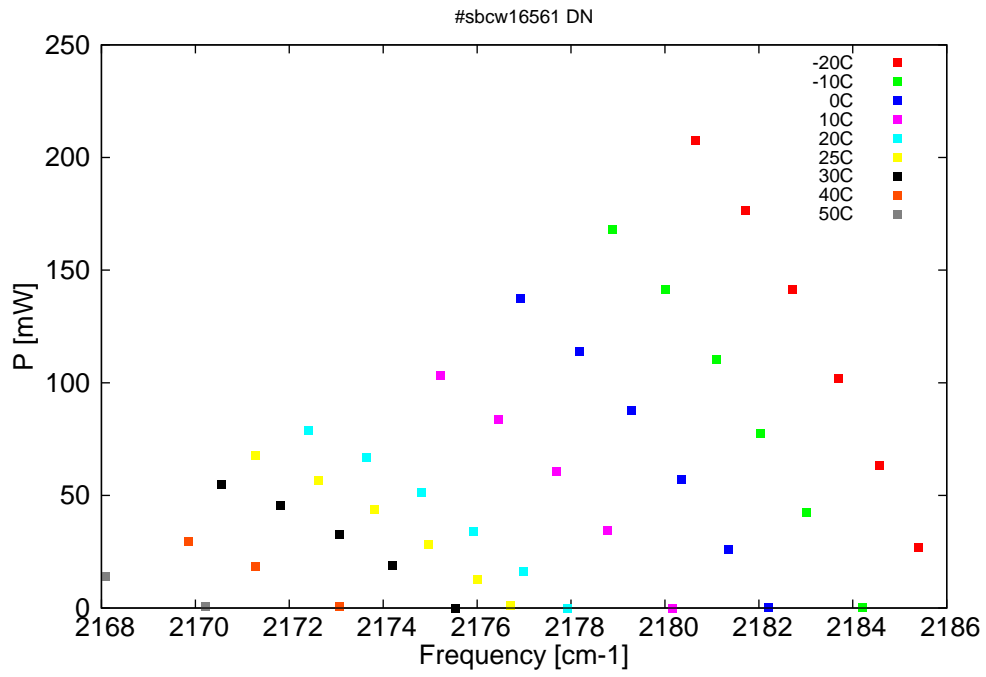


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

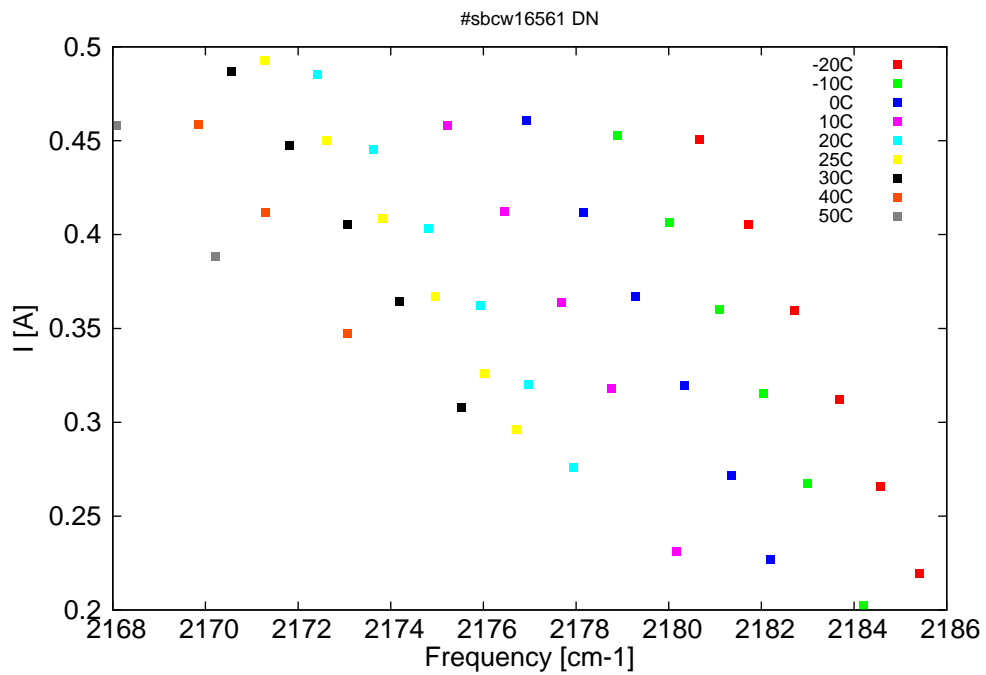


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4575.8	2185.4	26.8	-20	8.08	0.219
4577.6	2184.6	63.5	-20	8.27	0.266
4579.4	2183.7	102.1	-20	8.46	0.312
4581.4	2182.7	141.4	-20	8.64	0.359
4583.6	2181.7	176.7	-20	8.82	0.405
4585.8	2180.7	207.4	-20	9	0.451
4578.3	2184.2	0.2	-10	7.97	0.202
4580.8	2183	42.4	-10	8.25	0.267
4582.9	2182	77.3	-10	8.44	0.315
4584.9	2181.1	110.3	-10	8.62	0.36
4587.1	2180	141.5	-10	8.8	0.407
4589.5	2178.9	168.2	-10	8.99	0.453
4582.5	2182.2	0.3	0	8.05	0.227
4584.3	2181.4	25.9	0	8.23	0.272
4586.4	2180.3	56.9	0	8.43	0.319
4588.7	2179.3	87.7	0	8.62	0.367
4591	2178.2	114	0	8.81	0.412
4593.6	2176.9	137.2	0	9.01	0.461
4586.8	2180.2	0	10	8.05	0.231
4589.7	2178.8	34.5	10	8.39	0.318
4592	2177.7	60.7	10	8.59	0.364
4594.6	2176.5	83.5	10	8.79	0.412
4597.2	2175.2	103.3	10	8.98	0.458
4591.5	2177.9	0	20	8.2	0.276
4593.5	2177	16.4	20	8.38	0.32
4595.7	2175.9	34.2	20	8.55	0.362
4598.1	2174.8	51.5	20	8.73	0.403
4600.6	2173.6	66.7	20	8.91	0.445
4603.2	2172.4	78.9	20	9.08	0.485
4594.1	2176.7	0.9	25	8.17	0.296
4595.5	2176	12.5	25	8.39	0.326
4597.8	2175	28.2	25	8.56	0.367
4600.2	2173.8	43.7	25	8.74	0.409
4602.7	2172.6	56.8	25	8.92	0.45
4605.6	2171.3	67.8	25	9.11	0.493
4596.6	2175.5	0	30	8.32	0.308
4599.4	2174.2	18.8	30	8.54	0.364
4601.8	2173.1	32.8	30	8.72	0.406
4604.5	2171.8	45.5	30	8.9	0.448
4607.1	2170.6	54.9	30	9.08	0.487
4601.8	2173.1	0.9	40	8.44	0.347
4605.6	2171.3	18.5	40	8.73	0.412
4608.6	2169.9	29.7	40	8.93	0.459
4607.8	2170.2	0.9	50	8.58	0.388
4612.4	2168.1	14	50	8.92	0.458

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

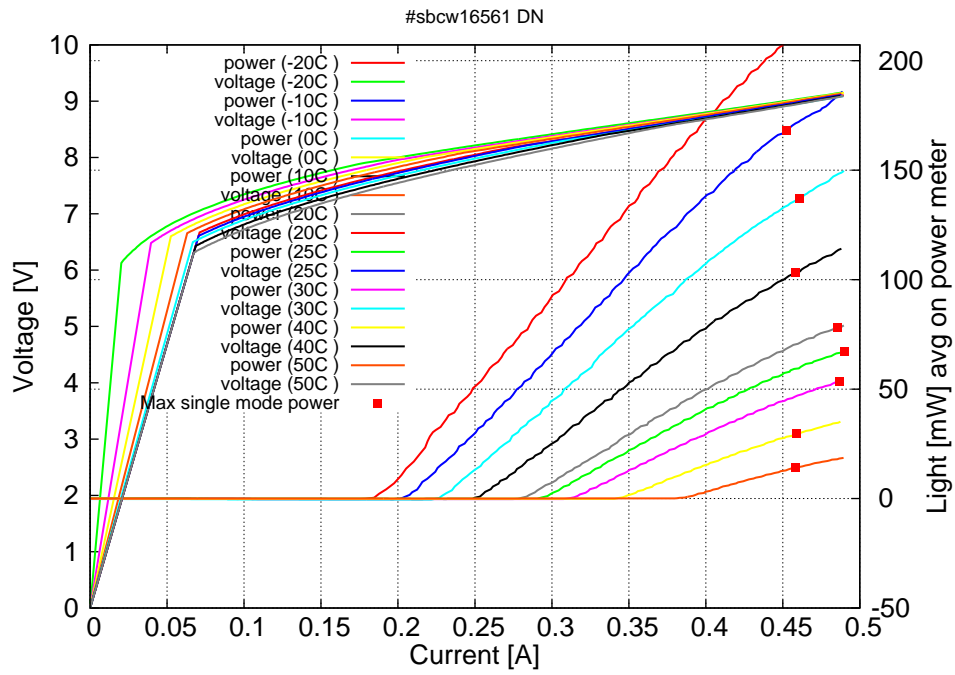


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=7.9V$ (2-wires measurements). Maximum operation current: 0.46A between -20C and 10C, 0.49A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

