

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

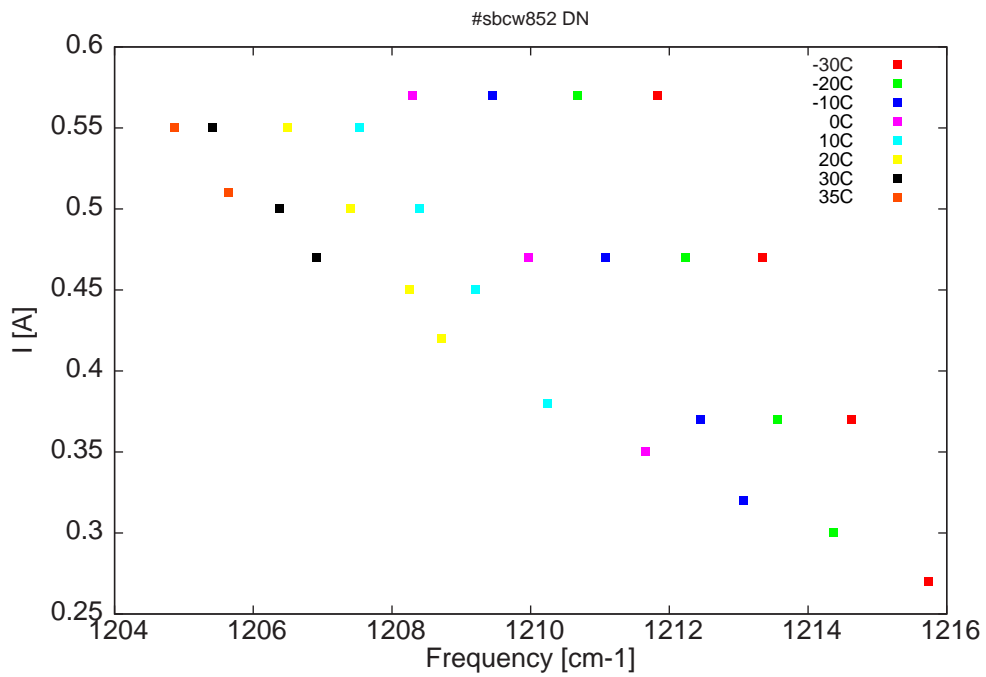


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

| $\lambda$ [nm] | $\nu$ [cm <sup>-1</sup> ] | P[mW] | Temp[°C] | $U_{LASER}$ [V] | I[A] |
|----------------|---------------------------|-------|----------|-----------------|------|
| 8225.4         | 1215.7                    | 0.1   | -30      | 8.2             | 0.27 |
| 8233           | 1214.6                    | 24.6  | -30      | 8.7             | 0.37 |
| 8241.6         | 1213.3                    | 50.2  | -30      | 9.2             | 0.47 |
| 8252           | 1211.8                    | 69.1  | -30      | 9.7             | 0.57 |
| 8234.7         | 1214.4                    | 0.1   | -20      | 8.3             | 0.3  |
| 8240.3         | 1213.6                    | 17.1  | -20      | 8.7             | 0.37 |
| 8249.3         | 1212.2                    | 40.9  | -20      | 9.2             | 0.47 |
| 8259.9         | 1210.7                    | 57.5  | -20      | 9.7             | 0.57 |
| 8243.6         | 1213.1                    | 0.1   | -10      | 8.3             | 0.32 |
| 8247.8         | 1212.4                    | 9.4   | -10      | 8.6             | 0.37 |
| 8257.1         | 1211.1                    | 31    | -10      | 9.1             | 0.47 |
| 8268.2         | 1209.5                    | 46    | -10      | 9.6             | 0.57 |
| 8253.1         | 1211.7                    | 0.1   | 0        | 8.4             | 0.35 |
| 8264.6         | 1210                      | 22.1  | 0        | 9.1             | 0.47 |
| 8276.2         | 1208.3                    | 35    | 0        | 9.6             | 0.57 |
| 8262.8         | 1210.2                    | 0.1   | 10       | 8.5             | 0.38 |
| 8269.9         | 1209.2                    | 10.5  | 10       | 8.9             | 0.45 |
| 8275.4         | 1208.4                    | 18.1  | 10       | 9.2             | 0.5  |
| 8281.4         | 1207.5                    | 23.4  | 10       | 9.5             | 0.55 |
| 8273.2         | 1208.7                    | 0.1   | 20       | 8.7             | 0.42 |
| 8276.5         | 1208.2                    | 2.8   | 20       | 8.9             | 0.45 |
| 8282.2         | 1207.4                    | 9.1   | 20       | 9.2             | 0.5  |
| 8288.5         | 1206.5                    | 13.7  | 20       | 9.5             | 0.55 |
| 8285.6         | 1206.9                    | 0.1   | 30       | 9               | 0.47 |
| 8289.3         | 1206.4                    | 1.9   | 30       | 9.1             | 0.5  |
| 8295.9         | 1205.4                    | 5.7   | 30       | 9.4             | 0.55 |
| 8294.4         | 1205.6                    | 0.1   | 35       | 9.2             | 0.51 |
| 8299.7         | 1204.9                    | 2     | 35       | 9.4             | 0.55 |

Table 1 : singlemode optical output power as function of operating parameters

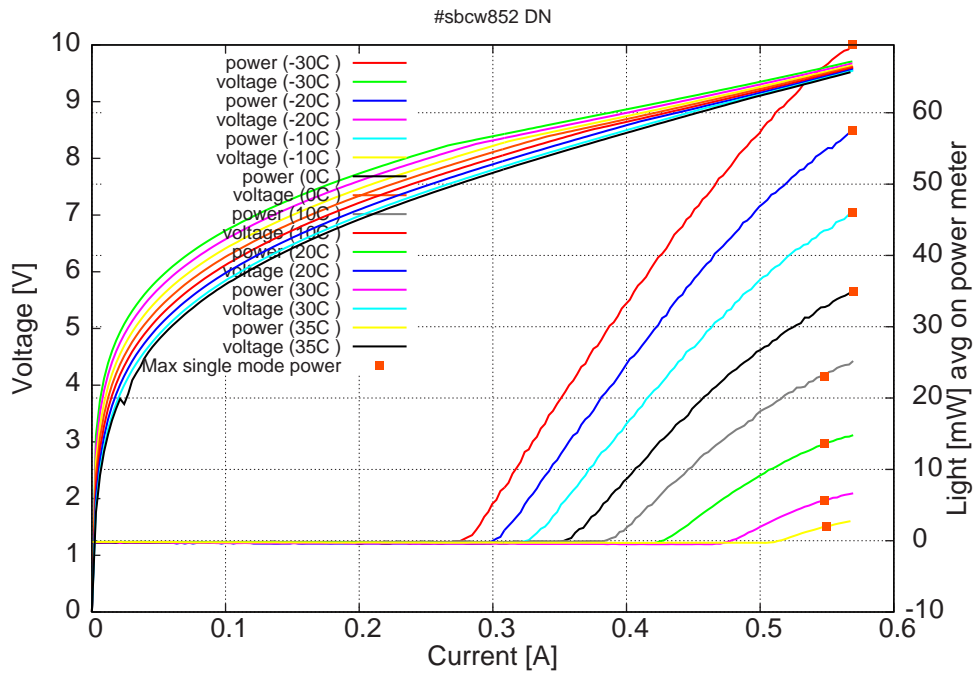


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -30C:  $I_{th}=280\text{mA}$  /  $V_{th}= 8.30\text{V}$  (2-wires measurements).

Note: Maximum operation current: 0.57A for all temperatures.

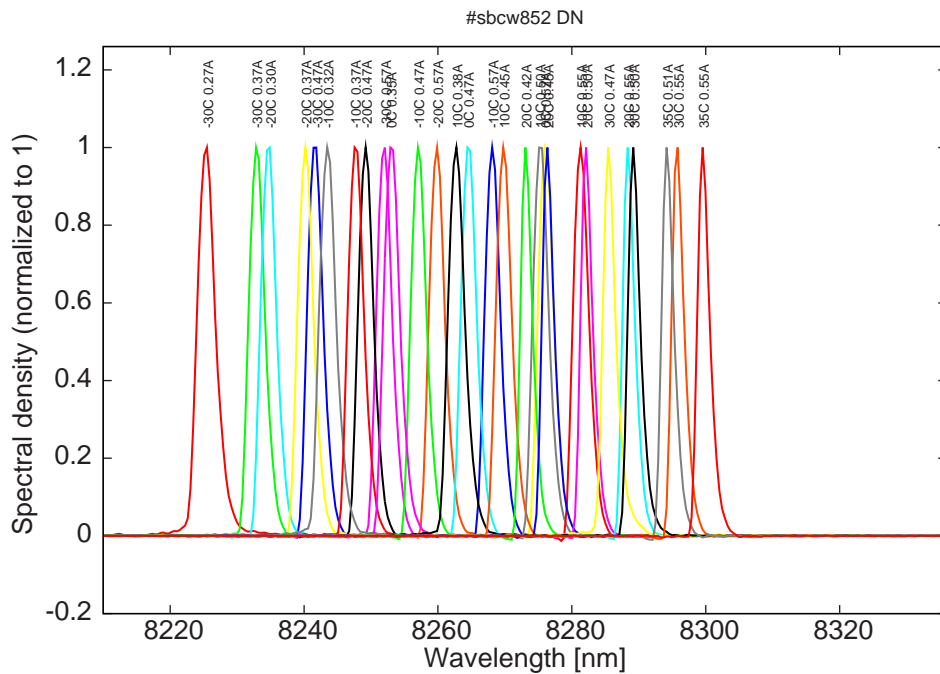


Figure 5: spectra at -30C, -20C, -10C, 0C, 10C, 20C, 30C and 35C for various DC currents

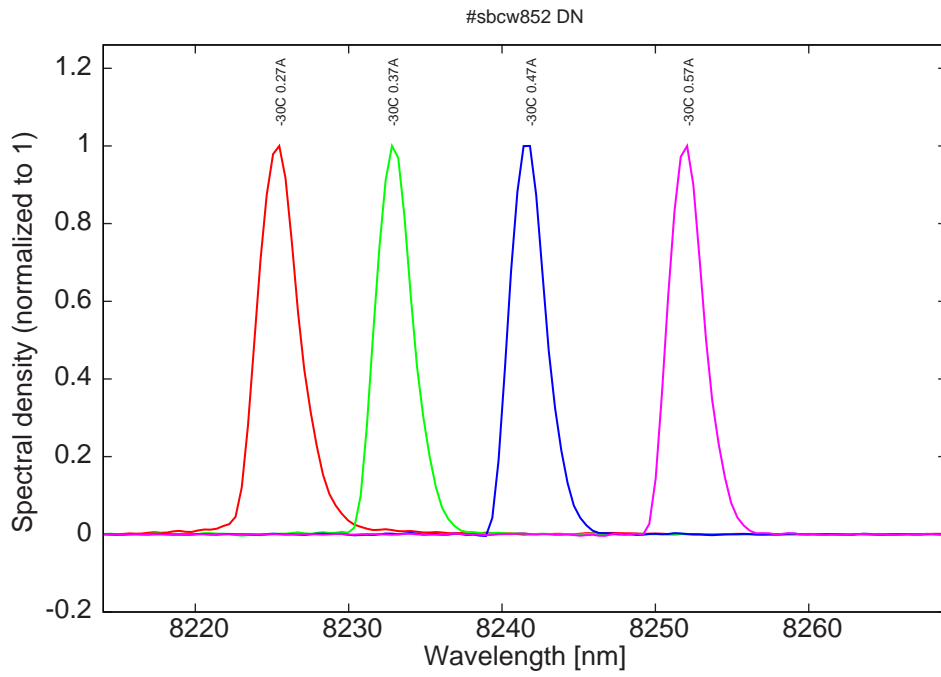


Figure 6: spectra at -30C for various DC currents

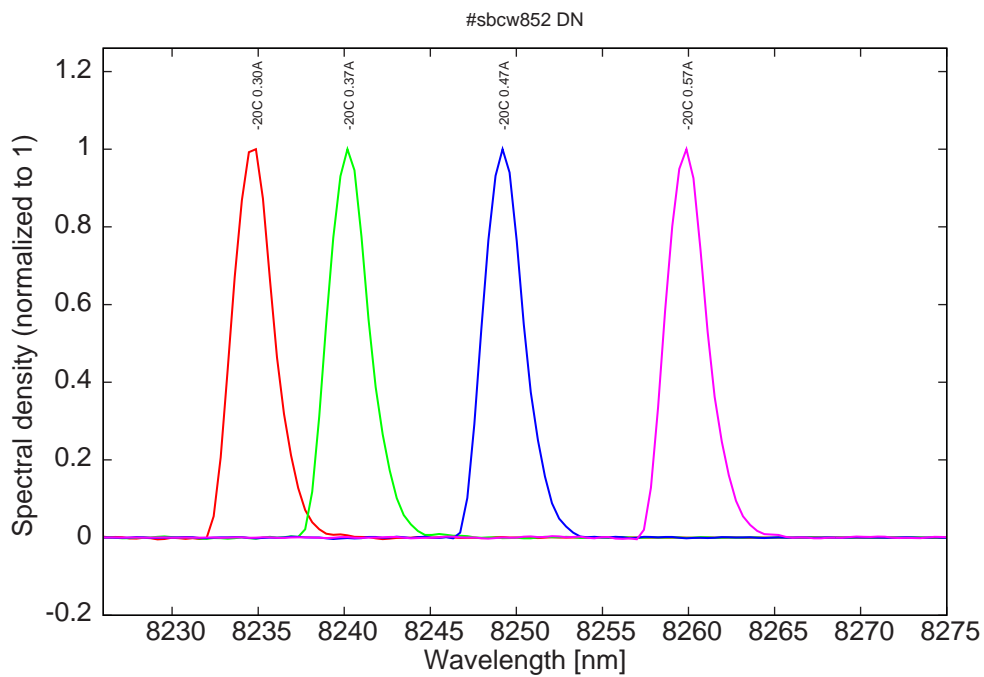


Figure 7: spectra at -20C for various DC currents

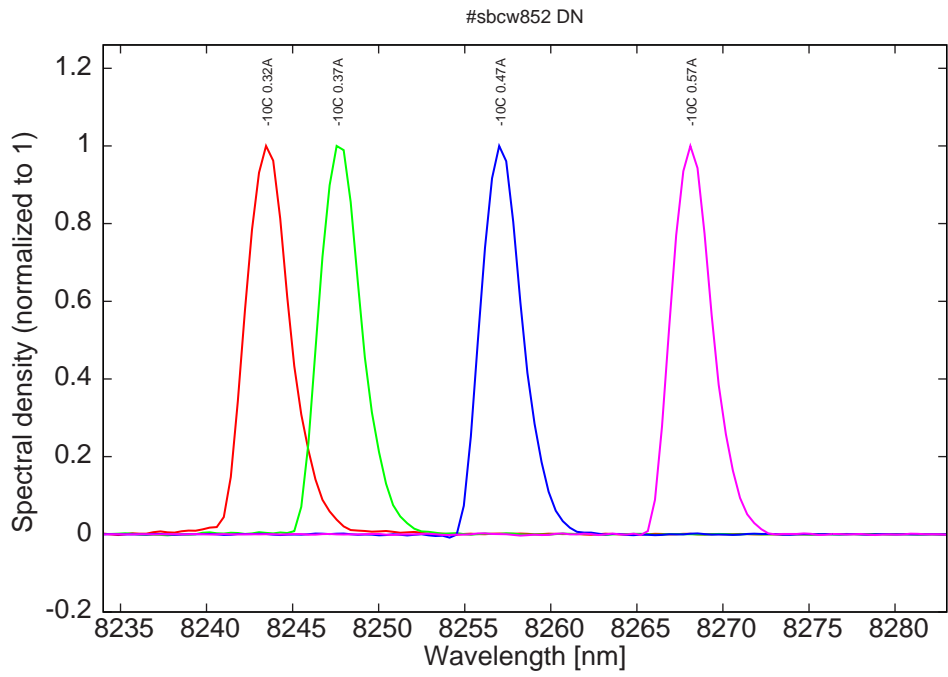


Figure 8: spectra at -10C for various DC currents

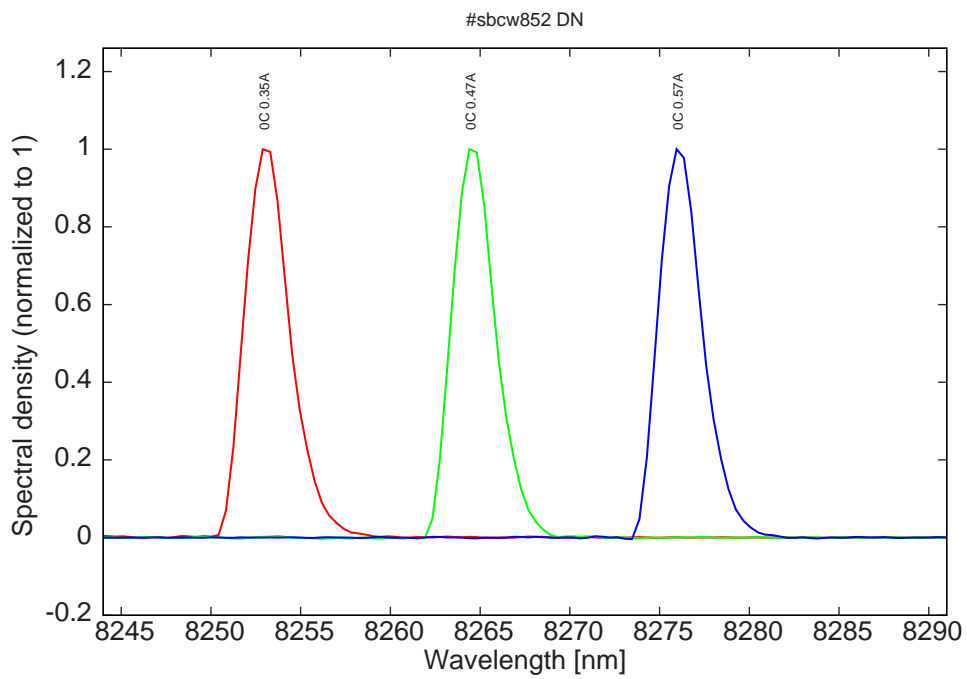


Figure 9: spectra at 0C for various DC currents

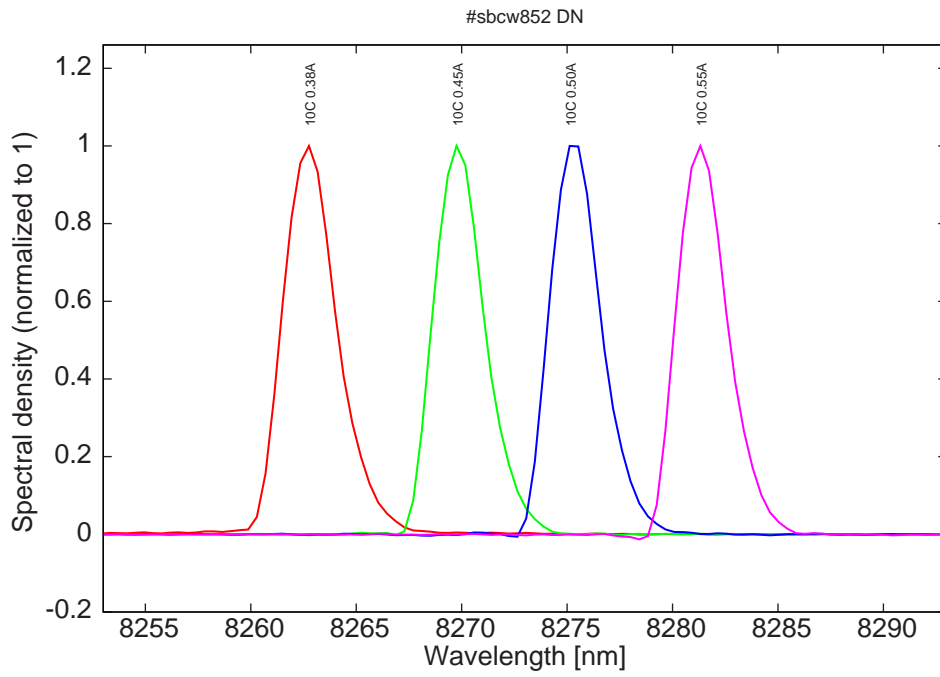


Figure 10: spectra at 10C for various DC currents

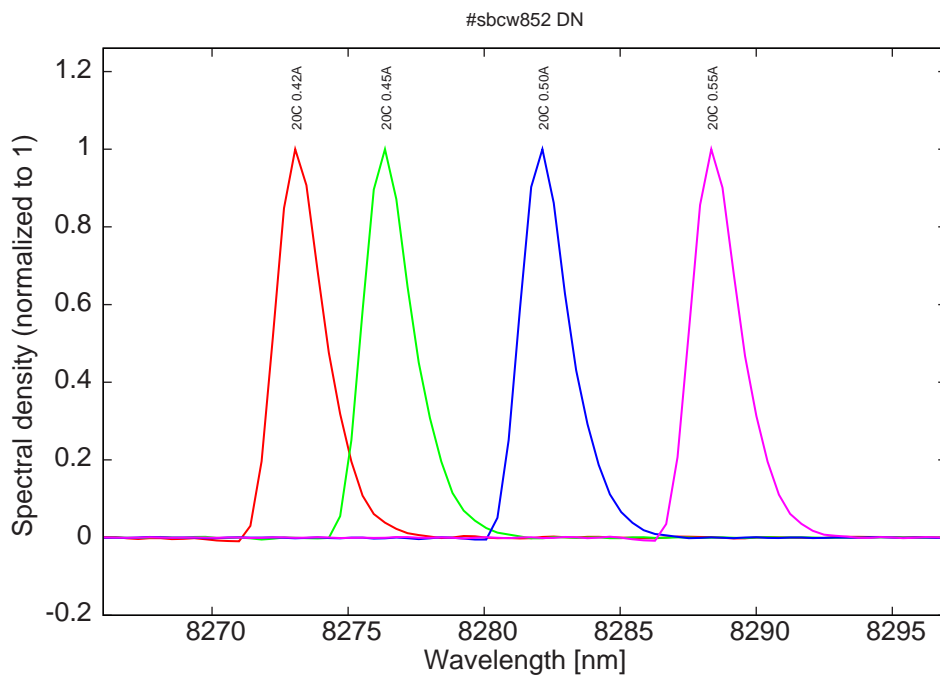


Figure 11: spectra at 20C for various DC currents

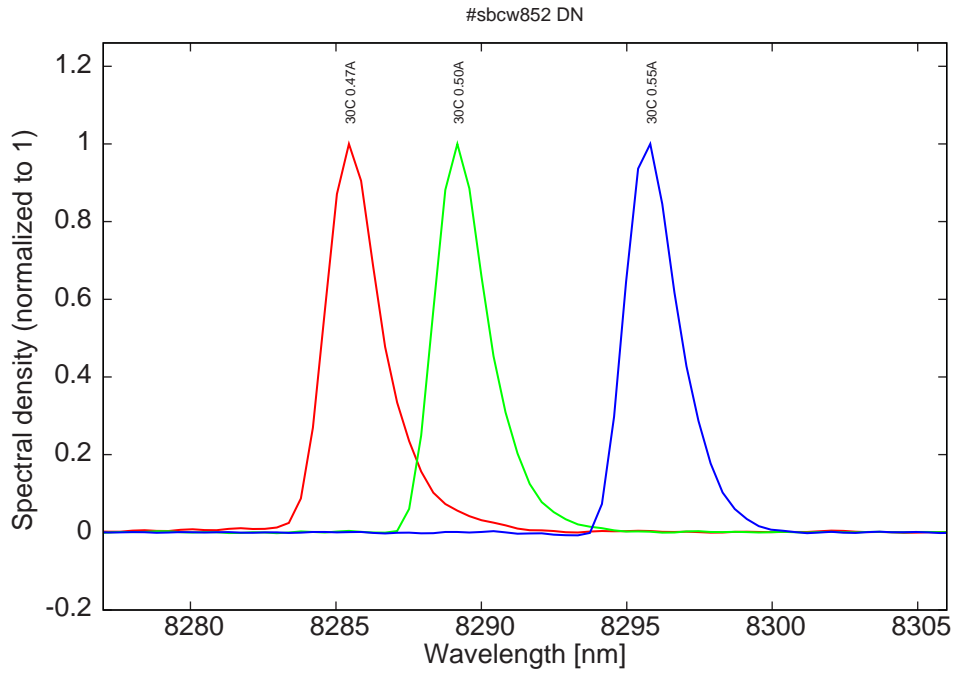


Figure 12: spectra at 30C for various DC currents

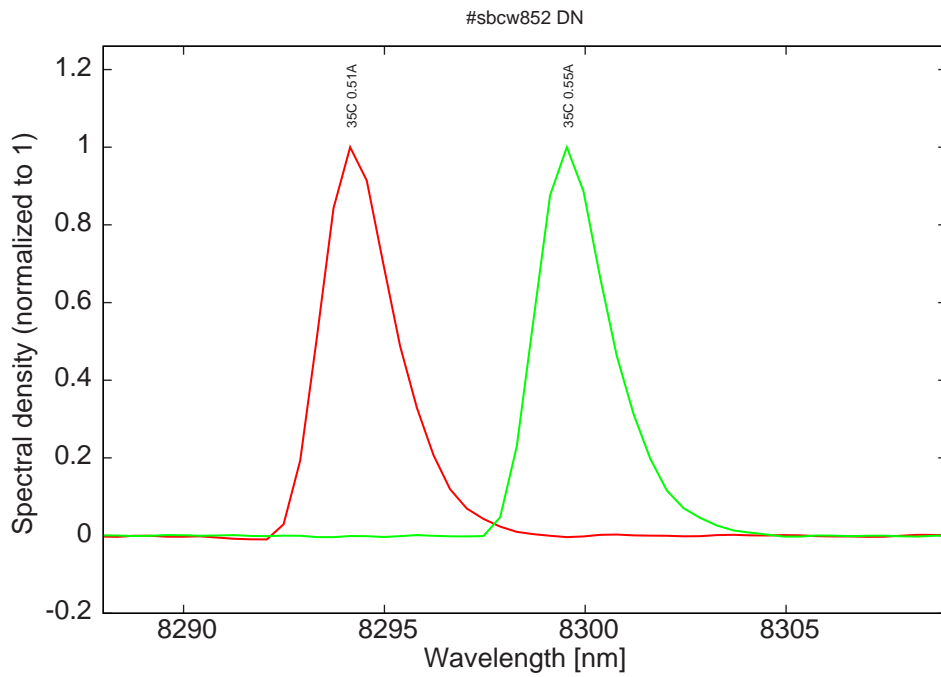


Figure 13: spectra at 35C for various DC currents