

**Features:**

- 3 power categories: SLDs with an output power of up to 25 mW ex SM-fiber and a 3-dB spectrum width of 62 – 65 nm
- centered at about 830, 850 and 865 nm
- very short coherence length
- negligible residual Fabry-Perot modulation depth; <1% (<0.05 dB) upon request

**Packages:**

- **fiber coupled** – Butterfly, DIL
- **free space** – TOW

**Special versions:**

- modules with reduced sensitivity to optical feedback

**Specifications (nominal emitter stabilization temperature is +25 °C)**

| Parameter  | Cat.  | Min | Typ. | Max  |
|--|-------|-----|------|------|
| Output power ex SM fiber, mW,<br>SLD-351                                 | HP1   | 5   | 7.5  |      |
|  | HP2   | 10  | 15   |      |
|  | HP3   | 20  | 25   |      |
| Free space output power, mW,<br>in a cone N.A=0.71, SLD-350*             | HP1   | 10  | 15   |      |
|  | HP2   | 20  | 30   |      |
|  | HP3   | 40  | 50   |      |
| Forward current**, mA  | HP1,2 |     | 250  | 300  |
|  | HP3   |     | 300  | 400  |
| Forward voltage, V   | All   |     |      | 3.0  |
| Central wavelength, nm   | HP1   |     | 830  |      |
|  | HP2   |     | 850  |      |
|  | HP3   |     | 865  |      |
| Spectrum width, FWHM, nm   | All   | 57  | 62   |      |
| Residual spectral modulation depth, %                                    | All   |     | 2.0  | 5.0  |
| Secondary coherence subpeaks<br>(Reflectivity), dB (10 log)              | All   |     | -25  |      |
| Spectral flatness***, dB   | All   |     | 2.7  | <3.0 |
| Slow/fast polarization ratio (PM-fiber<br>coupled polarized modules), dB | All   |     | 7.0  |      |
| Operating temperature****, °C  |       | -55 |      | +80  |
| Storage temperature, °C  | All   | -55 |      | +85  |
| Cooler current, A  |       |     |      | 1.2  |
| Cooler voltage, V  |       |     |      | 3.5  |

\* - TOW-packaged SLDs;

\*\* - current is specially adjusted to get the highest output power with equal intensity of spectral humps; different for different modules;

\*\*\* - describes spectral intensity dropout between spectral humps

\*\*\*\* - HP1-rated butterfly-packaged SLDs; more details upon request

The following part numbers should be used when **ordering**:

SLD-35(a)-(b)-(c)-(d)-(e)-XXX,

where:

(a) – 0 (free space) or 1 (fiber pigtailed),  
(b) – power category, HP1, HP2 or HP3,

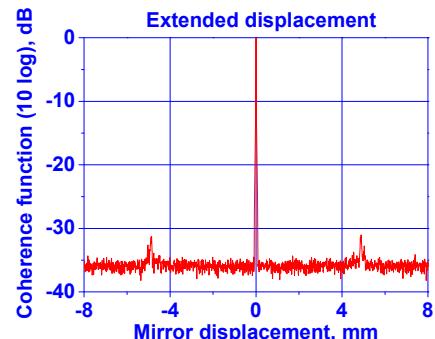
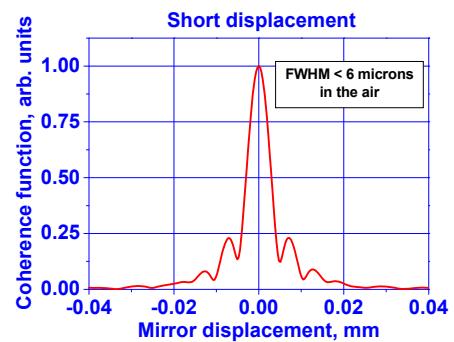
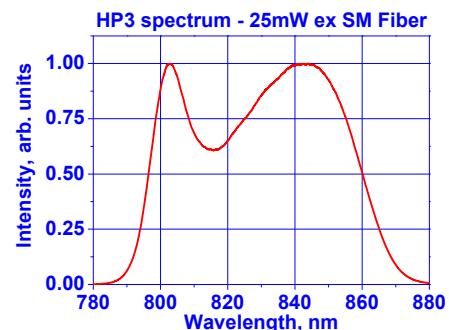
(c) – package type, (d) – SM or PM (for fiber coupled modules),  
(e) – PD (if PD monitor is required),

XXX – wavelength (830, 850, 865; a ±10-nm tolerance is guaranteed).

Example: SLD-351-HP1-DIL-SM-PD-855.

**Applications**

- ultra-high resolution OCT
- Bragg grating sensors
- fiber sensors
- optical measurements
- others

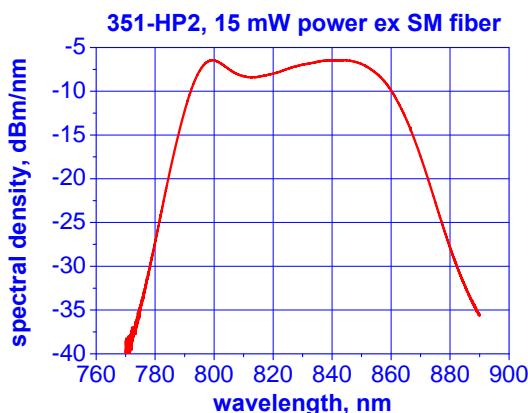
**PERFORMANCE EXAMPLES**

Mirror displacement = Optical path difference / 2

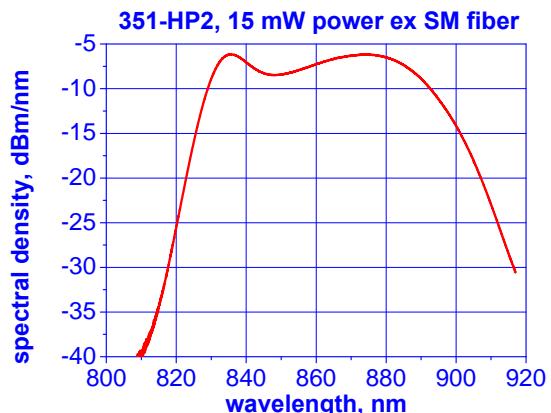
See the next page for more examples →

A maximum feedback of  $10^{-3}$  is allowed to run HP series SLDs safely at full power. Models with reduced sensitivity to optical feedback are available upon request.

## MORE PERFORMANCE EXAMPLES

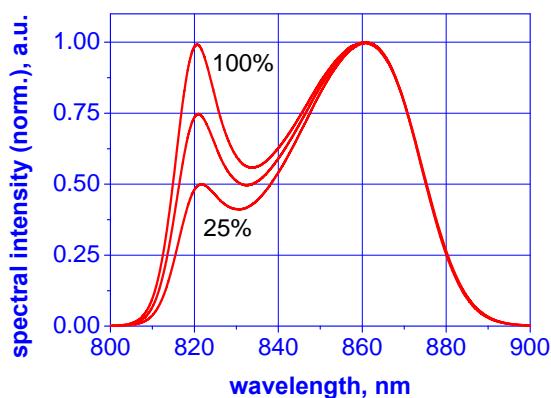
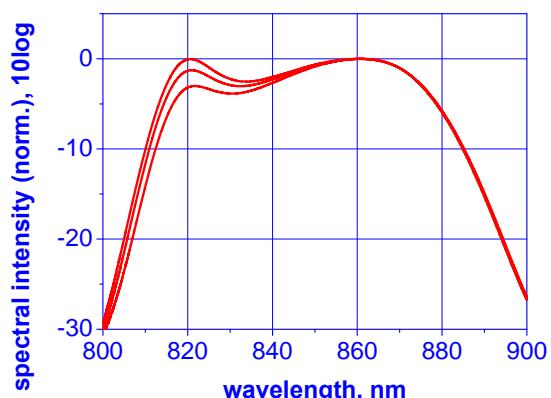


65 nm wide SLD at 830 nm – spectral density



60 nm wide SLD at 860 nm – spectral density

**Spectrum of SLD-351 depends on output power/drive current. The figure below shows a typical example of SLD spectrum at full power, 50% of full power, and 25 % of full power**

Spectrum at 25%, 50% and 100% optical power  
(linear plot)Spectrum at 25%, 50% and 100% optical power  
(log plot)

**All specifications are subject to change without notice.**