

# SDL 810/830/852nm Laser Diodes

## SDL-5400 Series Single-mode Laser Diodes 810/830/852nm

Available in power levels up to 200 mW kink-free, this SDL advanced laser diode combines a quantum well structure and a real-refractive index-guided single-mode waveguide to provide high power, low astigmatism, narrow spectral width, and a single spatial mode Gaussian far field. SDL-5400 series laser diodes are among the most reliable high-power laser diodes available in the industry today.

The SDL-5400 series laser diodes operate in single longitudinal mode under some conditions. Like in all Fabry-Perot index-guided laser diodes, spectral broadening, mode hopping, and longitudinal mode instability may occur due to small changes in drive current, diode junction temperature, or optical feedback.

The unique diode structure features high reliability with long operating life, and very low early failure rate. Very high brightness (20 MW/cm<sup>2</sup> steradian) is provided by the SDL-5430.



### List of SDL Laser Diodes available:

Wavelength	Output Power	Package Type	MPD	Part Number
<b>50mW Output Power</b>				
810nm ± 5nm	50mW	5.6mm window (3-pin) TO-56 9mm window (3-pin) SOT-148	✓ ✓	SDL-5401-J1 (810) SDL-5401-G1 (810)
830nm -10/+20nm	50mW	5.6mm window (3-pin) TO-56	✓	SDL-5401-J1 (830)
852nm ± 10nm	50mW	5.6mm window (3-pin) TO-56 9mm window (3-pin) SOT-148	✓ ✓	SDL-5401-J1 (852) SDL-5401-G1 (852)
<b>100mW Output Power</b>				
810nm ± 5nm	100mW	5.6mm window (3-pin) TO-56	✓	SDL-5411-J1 (810)
830nm -10/+20nm	100mW	5.6mm window (3-pin) TO-56	✓	SDL-5411-J1 (830)
852nm ± 10nm	100mW	5.6mm window (3-pin) TO-56	✓	SDL-5411-J1 (852)
<b>150mW Output Power</b>				
810nm ± 5nm	150mW	5.6mm window (3-pin) TO-56	✓	SDL-5421-J1 (810)
830nm -10/+20nm	150mW	5.6mm window (3-pin) TO-56	✓	SDL-5421-J1 (830)
852nm ± 10nm	150mW	5.6mm window (3-pin) TO-56	✓	SDL-5421-J1 (852)
<b>200mW Output Power</b>				
830nm -10/+20nm	200mW	9mm window (3-pin) SOT-148	✓	SDL-5431-G1 (830)
830nm -10/+20nm	200mW	5.6mm window (3-pin) TO-56	✓	SDL-5431-J1 (830)
852nm ± 10nm	200mW	5.6mm window (3-pin) TO-56	✓	SDL-5431-J1 (852)

MPD = Internal Monitor Photo Diode  
All lasers carry a warranty period of 90 days.  
Limited stock of G1 package available

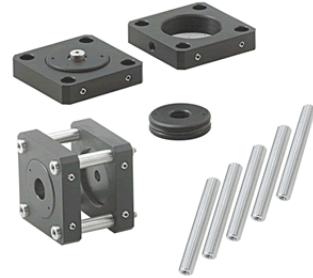
## Related Recommended Products

### ➤ **TO-3 Collimation Package**

Ideal for collimating high power laser diodes,  
The TO3 collimation package can be used one  
of the two ways:

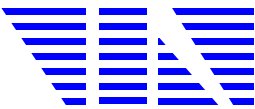
- (1) If the laser output is low, and no heat sinking is required, the laser can be mounted directly to the package.
- (2) For higher power lasers or in applications where better temperature regulation is required, the collimation package can be mounted directly onto any heatsink that is designed to accept TO-3 laser package.

Laser and lens not included.



#### **Caution!**

Operating the Laser Diodes at their maximum capacity, and without any proper heat sinking will affect the long-term reliability, and life of the Laser Diodes.



**VIN KAROLA INSTRUMENTS**

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