

## LP405-SF30 - December 8, 2017

Item # LP405-SF30 was discontinued on Dec 8, 2017. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

### PIGTAILED LASER DIODES, SINGLE MODE FIBER

- ▶ Wavelengths from 405 to 1625 nm
- ▶ FC/PC or FC/APC Connector
- ▶ Custom Pigtailed Available

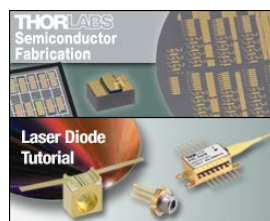


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#### OVERVIEW

##### Features

- Single Mode Pigtailed from 405 nm to 1625 nm
- Internal 8°-Angle-Cleaved Fiber (See the *Design* Tab)
- Connector: FC/PC or FC/APC (2.0 mm Narrow Key)
- 1 m of SM Fiber
- Custom Pigtailed Available Upon Request



Thorlabs offers a variety of laser diodes pigtailed with single mode (SM) optical fiber. Diodes are sorted by wavelength and then power, and tables list key specifications for quick identification of diodes suitable for your application. The blue button in the Info column within the tables opens a pop-up window that contains more detailed specifications for each item, as well as mechanical drawings.

Our precise pigtail alignment process for laser diodes includes multiple test and inspection points that ensure that the coupling efficiency of the laser emission into the single mode pigtail is maximized. In addition, the input end of the fiber is cleaved at an 8° angle in order to minimize back reflections that can cause the output intensity to fluctuate (see the *Design* tab for details). We offer versions based on TO-packaged diodes (Ø5.6 mm, Ø9 mm, or non-standard Ø9.5 mm).

While the center wavelength is listed for each laser diode, this is only a typical number. The center wavelength of a particular unit varies from production run to production run, so the diode you receive may not operate at the typical center wavelength. After clicking "Choose Item" below, a list will appear

Laser Diode Selection Guide <sup>a</sup>
<b>Shop by Package / Type</b>
TO Can (Ø3.8, Ø5.6, Ø9, and Ø9.5 mm) TO Can Pigtail (SM) TO Can Pigtail (PM) TO Can Pigtail (MM) FP Butterfly Package FBG-Stabilized Butterfly Package Chip on Submount MIR Fabry-Perot Two-Tab C-Mount One-Tab C-Mount
<b>Single-Frequency Lasers</b>
DFB TO Can Pigtail (SM) VHG-Stabilized TO Can or Pigtail (SM) ECL Butterfly Package DBR Butterfly Package MIR DFB Two-Tab C-Mount MIR DFB D-Mount MIR DFB High Heat Load
<b>Shop By Wavelength</b>

that contains the dominant wavelength, output power, and operating current of each in-stock unit. Clicking on the red Docs Icon next to the serial number provides access to a PDF with serial-number-specific L-I-V and spectral characteristics.



- Our complete selection of laser diodes is available on the *LD Selection Guide* tab above.

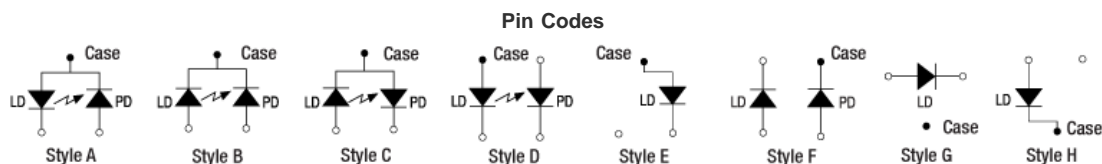
The reliability of the laser diode rapidly declines at higher temperatures. Therefore, for stable output power and wavelength, it is highly recommended that you use a temperature controller with these products. Diodes can also be temperature tuned, which will alter the lasing wavelength.

Laser diodes are sensitive to electrostatic shock. Please take the proper precautions when handling the device, such as using an ESD wrist strap. These lasers are also sensitive to optical feedback, which can cause significant fluctuations in the output power of the laser diode depending on the application.

We recommend cleaning the fiber connector before each use, if there is any chance that dust or other contaminants may have deposited on the surface. To view our fiber cleaning products, click here. The laser intensity at the center of the fiber tip can be very high and may burn the tip of the fiber if contaminants are present. While the connectors on these pigtailed laser diodes are cleaned and capped before shipping, we cannot guarantee that they will remain free of contamination after they are removed from the package. For all of these pigtailed laser diodes, the laser should be off when connecting or disconnecting the device from other fibers, particularly for lasers with power levels above 10 mW.

Please contact Technical Support if you would like a quote on custom pigtailed laser diodes or for a volume order.

Webpage Features	
	Clicking this icon opens a window that contains specifications and mechanical drawings.
	Clicking this icon allows you to download our standard support documentation.
<a href="#">Choose Item</a>	Clicking the words "Choose Item" opens a drop-down list containing all of the in-stock lasers around the desired center wavelength. The red icon next to the serial number then allows you to download L-I-V and spectral measurements for that serial-numbered device.

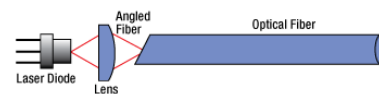


For warranty information and the Thorlabs Life Support and Military Use Policy for laser diodes, please refer to the *LD Operation* tab.

[Hide Design](#)

## DESIGN

The drawing to the right shows a laser diode's emitted light focused into an angle-polished fiber. By angling the optical fiber at 8°, light that is not coupled into the optical fiber is reflected away from the laser diode. If this reflected light were reflected back toward the diode, light would be coupled into the diode and cause fluctuations in power and wavelength.



### Further Reducing Back Reflection

Although we use a fiber coupling design that minimizes back reflections, other factors may couple light back into the fiber. Many of our standard pigtailed laser diodes feature optical fiber with an FC/PC connector. When the FC/PC connector is not connected directly to another FC/PC connector, about 4% of light in the fiber is reflected back toward the laser diode due to the silica/air interface. Customers who require a silica/air interface or minimal back reflections in their application can contact Tech Support to request FC/APC connectors. As FC/APC connectors have an angled polish, light reflected back toward the diode will be further minimized. We stock one pigtailed diode for 808 nm (Item # LP808-SA40) with an FC/APC connector.

[Hide LD Operation](#)

## LD OPERATION

### Laser Diode and Laser Diode Pigtail Warranty

When operated within their specifications, laser diodes have extremely long lifetimes. However most failures occur from mishandling or operating the lasers beyond their maximum ratings. Laser Diodes are among the most static sensitive devices currently made. Since Thorlabs does not receive any warranty credit from our laser manufacturers we cannot guarantee the lasers after their sealed package has been open. Thorlabs will be happy to extend a full refund or credit for any lasers returned in their original sealed package.

## Handling and Storage Precautions

Because of their extreme susceptibility to damage from electrostatic discharge (ESD), care should be taken whenever handling and operating laser diodes:

- **Wrist Straps:** Use grounded anti-static wrist straps whenever handling diodes.
- **Anti-static Mats:** Always work on grounded anti-static mats.
- **Storing Lasers:** When not in use, short the leads of the laser together to protect against ESD damage.

## Operating and Safety Precautions

Use an appropriate driver, laser diodes require precise control of operating current and voltage to avoid overdriving the lasers. In addition, the laser driver should provide protection against power supply transients. Select a laser driver appropriate for your application. **Do not use a voltage supply with a current limiting resistor** since it does not provide sufficient regulation to protect the laser.

- **Power Meters:** When setting up and calibrating a laser with its driver, use a NIST-traceable power meter to precisely measure the laser output. It is usually safest to measure the laser output directly before placing the laser in an optical system. If this is not possible, be sure to take all optical losses (transmissive, aperture stopping, etc.) into consideration when determining the total output of the laser.
- **Reflections:** Flat surfaces in the optical system in front of a laser diode can cause some of the laser energy to reflect back onto the laser's monitor photodiode giving an erroneously high photodiode current. If optical components are moved within the system and energy is no longer reflected onto the monitor photodiode, a constant power feedback loop will sense the drop in photodiode current and try to compensate by increasing the laser drive current and possibly overdriving the laser. Back reflections can also cause other malfunctions or damage to laser diodes. To avoid this, be sure that all surfaces are angled 5-10° and when necessary, use optical isolators to attenuate direct feedback into the laser.
- **Heat Sinks:** Laser lifetime is inversely proportional to operating temperature. Always mount the laser in a suitable heat sink to remove excess heat from the laser package.
- **Voltage and Current Overdrive:** Be careful not to exceed the maximum voltage and currents even momentarily. Also, reverse voltages as little as 3 V can damage a laser diode.
- **ESD Sensitive Device:** Even when a laser is operating it is susceptible to ESD damage. This is particularly aggravated by using long interface cables between the laser and its driver due to the inductance that the cable presents. Avoid exposing the laser or its mounting apparatus to ESDs at all times.
- **ON/OFF and Power Supply Coupled Transients:** Because of their fast response times, laser diodes can be easily damaged by transients less than 1  $\mu$ s. High current devices such as soldering irons, vacuum pumps, fluorescent lamps, etc., can cause large momentary transients; use surge-protected outlets.

If you have any questions regarding laser diodes, please call your local Thorlabs Technical Support office for assistance.

## Life Support and Military Use Application Policy

THORLABS' PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS OR IN ANY MILITARY APPLICATION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF THORLABS, INC.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system or to affect its safety or effectiveness.
3. The Thorlabs products described in this document are not intended nor warranted for usage in Military Applications.

[Hide Laser Safety](#)

## L A S E R   S A F E T Y

### Laser Safety and Classification

Safe practices and proper usage of safety equipment should be taken into consideration when operating lasers. The eye is susceptible to injury, even from very low levels of laser light. Thorlabs offers a range of laser safety accessories that can be used to reduce the risk of accidents or injuries. Laser emission in the visible and near infrared spectral ranges has the greatest potential for retinal injury, as the cornea and lens are transparent to those wavelengths, and the lens can focus the laser energy onto the retina.

### Safe Practices and Light Safety Accessories

- Thorlabs recommends the use of safety

eyewear whenever working with laser beams with non-negligible powers (i.e., > Class 1) since metallic tools such as screwdrivers can accidentally redirect a beam.




- Laser goggles designed for specific wavelengths should be clearly available near laser setups to protect the wearer from unintentional laser reflections.
- Goggles are marked with the wavelength range over which protection is afforded and the minimum optical density within that range.
- Laser Safety Curtains and Blackout Materials can prevent direct or reflected light from leaving the experimental setup area.
- Thorlabs' Enclosure Systems can be used to contain optical setups to isolate or minimize laser hazards.
- A fiber-pigtailed laser should always be turned off before connecting it to or disconnecting it from another fiber, especially when the laser is at power levels above 10 mW.
- All beams should be terminated at the edge of the table, and laboratory doors should be closed whenever a laser is in use.
- Do not place laser beams at eye level.
- Carry out experiments on an optical table such that all laser beams travel horizontally.
- Remove unnecessary reflective items such as reflective jewelry (e.g., rings, watches, etc.) while working near the beam path.
- Be aware that lenses and other optical devices may reflect a portion of the incident beam from the front or rear surface.
- Operate a laser at the minimum power necessary for any operation.
- If possible, reduce the output power of a laser during alignment procedures.
- Use beam shutters and filters to reduce the beam power.
- Post appropriate warning signs or labels near laser setups or rooms.
- Use a laser sign with a lightbox if operating Class 3R or 4 lasers (i.e., lasers requiring the use of a safety interlock).
- Do not use Laser Viewing Cards in place of a proper Beam Trap.



## Laser Classification

Lasers are categorized into different classes according to their ability to cause eye and other damage. The International Electrotechnical Commission (IEC) is a global organization that prepares and publishes international standards for all electrical, electronic, and related technologies. The IEC document 60825-1 outlines the safety of laser products. A description of each class of laser is given below:

Class	Description	Warning Label
1	This class of laser is safe under all conditions of normal use, including use with optical instruments for intrabeam viewing. Lasers in this class do not emit radiation at levels that may cause injury during normal operation, and therefore the maximum permissible exposure (MPE) cannot be exceeded. Class 1 lasers can also include enclosed, high-power lasers where exposure to the radiation is not possible without opening or shutting down the laser.	
1M	Class 1M lasers are safe except when used in conjunction with optical components such as telescopes and microscopes. Lasers belonging to this class emit large-diameter or divergent beams, and the MPE cannot normally be exceeded unless focusing or imaging optics are used to narrow the beam. However, if the beam is refocused, the hazard may be increased and the class may be changed accordingly.	
2	Class 2 lasers, which are limited to 1 mW of visible continuous-wave radiation, are safe because the blink reflex will limit the exposure in the eye to 0.25 seconds. This category only applies to visible radiation (400 - 700 nm).	
2M	Because of the blink reflex, this class of laser is classified as safe as long as the beam is not viewed through optical instruments. This laser class also applies to larger-diameter or diverging laser beams.	
3R	Lasers in this class are considered safe as long as they are handled with restricted beam viewing. The MPE can be exceeded with this class of laser, however, this presents a low risk level to injury. Visible, continuous-wave lasers are limited to 5 mW of output power in this class.	
	Class 3B lasers are hazardous to the eye if exposed directly. However, diffuse reflections are not harmful. Safe handling of devices in	

<b>3B</b>	this class includes wearing protective eyewear where direct viewing of the laser beam may occur. In addition, laser safety signs lightboxes should be used with lasers that require a safety interlock so that the laser cannot be used without the safety light turning on. Class-3B lasers must be equipped with a key switch and a safety interlock.	
<b>4</b>	This class of laser may cause damage to the skin, and also to the eye, even from the viewing of diffuse reflections. These hazards may also apply to indirect or non-specular reflections of the beam, even from apparently matte surfaces. Great care must be taken when handling these lasers. They also represent a fire risk, because they may ignite combustible material. Class 4 lasers must be equipped with a key switch and a safety interlock.	
All class 2 lasers (and higher) must display, in addition to the corresponding sign above, this triangular warning sign		

[Hide 405 - 488 nm Pigtailed](#)

### 405 - 488 nm Pigtailed

Item #	Info	Wavelength	Power (Typ.) <sup>a</sup>	Typical/Max Drive Current <sup>a</sup>	Pin Code <sup>b</sup>	Package	Compatible Socket	Wavelength Tested	Recommended Mount(s)	Recommended Driver
LP405-SF10		405 nm	10 mW	50 mA / 60 mA	B	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LP405-SF30		405 nm	30 mW	100 mA / 150 mA	G	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP450-SF15		450 nm	15 mW	85 mA / 120 mA	E	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP473-SF6		473 nm	6 mW	80 mA / 120 mA	B	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LP488-SF20		488 nm	20 mW	85 mA / 110 mA	B	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>


- Do not exceed the maximum optical power or maximum drive current, whichever occurs first.
- Laser diodes with A, B, C, or D pin codes have a built-in monitor photodiode and therefore support constant power operation.
- This socket is included with the purchase of the corresponding laser diode.
- The ITC4001 driver is only necessary if the LDM9LP mount or a custom mount is used, as the CLD1010LP and CLD1011LP are each a combined mount and driver.

Part Number	Description	Price	Availability
LP405-SF10	405 nm, 10 mW, B Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$607.00	Today
LP405-SF10	CWL = 404.6 nm, P = 10.0 mW (I = 52 mA), 25 °C	\$607.00	Today
LP405-SF10	CWL = 404.8 nm, P = 10.0 mW (I = 52 mA), 25 °C	\$607.00	Today
LP405-SF10	CWL = 404.8 nm, P = 10.0 mW (I = 52 mA), 25 °C	\$607.00	Today
LP405-SF10	CWL = 404.4 nm, P = 10.0 mW (I = 53 mA), 25 °C	\$607.00	Today
LP405-SF10	CWL = 403.9 nm, P = 10.0 mW (I = 47 mA), 25 °C	\$607.00	Today
LP405-SF10	CWL = 404.8 nm, P = 10.0 mW (I = 52 mA), 25 °C	\$607.00	Today
LP405-SF10	CWL = 403.8 nm, P = 10.0 mW (I = 45 mA), 25 °C	\$607.00	Today
LP405-SF10		\$607.00	Today
LP405-SF30	405 nm, 30 mW, G Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$806.00	Lead Time
LP450-SF15	450 nm, 15 mW, E Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$632.80	Today
LP450-SF15		\$632.80	Today
LP450-SF15	CWL = 447.4 nm, P = 15.0 mW (I = 103 mA), 25 °C	\$632.80	Today
LP450-SF15	CWL = 452.2 nm, P = 15.0 mW (I = 99 mA), 25 °C	\$632.80	Today
LP450-SF15	CWL = 449.6 nm, P = 15.0 mW (I = 57 mA), 25 °C	\$632.80	Today
LP450-SF15	CWL = 448.7 nm, P = 15.0 mW (I = 81 mA), 25 °C	\$632.80	Today
LP450-SF15	CWL = 449.9 nm, P = 15.0 mW (I = 74 mA), 25 °C	\$632.80	Today
LP450-SF15	CWL = 448.4 nm, P = 15.0 mW (I = 85 mA), 25 °C	\$632.80	3-5 Days

LP450-SF15	CWL = 449.5 nm, P = 15.0 mW (I = 71 mA), 25 °C	\$632.80	Today
LP450-SF15		\$632.80	3-5 Days
LP473-SF6	473 nm, 6 mW, B Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$4,602.00	3-5 Days
LP488-SF20	488 nm, 20 mW, B Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$2,863.00	Today
LP488-SF20	CWL = 487.5 nm, P = 20.0 mW (I = 64 mA), 25 °C	\$2,863.00	Today
LP488-SF20	CWL = 485.1 nm, P = 20.0 mW (I = 63 mA), 25 °C	\$2,863.00	Today
LP488-SF20	CWL = 488.4 nm, P = 20.0 mW (I = 86 mA), 25 °C	\$2,863.00	Today
LP488-SF20		\$2,863.00	3-5 Days
LP488-SF20		\$2,863.00	Today

[Hide 520 nm Pigtail](#)

### 520 nm Pigtail


Item #	Info	Wavelength	Power (Typ.) <sup>a</sup>	Typical/Max Drive Current <sup>a</sup>	Pin Code <sup>b</sup>	Package	Compatible Socket	Wavelength Tested	Recommended Mounts	Recommended Driver
LP520-SF15		520 nm	15 mW	140 mA / 180 mA	E	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>c</sup>

- Do not exceed the maximum optical power or maximum drive current, whichever occurs first.
- Laser diodes with A, B, C, or D pin codes have a built-in monitor photodiode and therefore support constant power operation.
- The ITC4001 driver is only necessary if the LDM9LP mount or a custom mount is used, as the CLD1010LP is both a mount and a driver.

Part Number	Description	Price	Availability
LP520-SF15	520 nm, 15 mW, E Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$663.00	Today
LP520-SF15	CWL = 518.3 nm, P = 15.0 mW (I = 88 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 517.4 nm, P = 15.0 mW (I = 81 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 518.3 nm, P = 15.0 mW (I = 120 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 517.2 nm, P = 15.0 mW (I = 77 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 517.0 nm, P = 15.0 mW (I = 80 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 516.8 nm, P = 15.0 mW (I = 87 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 518.2 nm, P = 15.0 mW (I = 75 mA), 25 °C	\$663.00	3-5 Days
LP520-SF15	CWL = 515.4 nm, P = 15.0 mW (I = 85 mA), 25 °C	\$663.00	3-5 Days
LP520-SF15	CWL = 518.2 nm, P = 15.0 mW (I = 80 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 516.3 nm, P = 15.0 mW (I = 78 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 519.1 nm, P = 15.0 mW (I = 85 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 518.1 nm, P = 15.0 mW (I = 75 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 518.9 nm, P = 15.0 mW (I = 102 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 518.4 nm, P = 15.0 mW (I = 81 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 518.3 nm, P = 15.0 mW (I = 84 mA), 25 °C	\$663.00	Today
LP520-SF15	CWL = 518.7 nm, P = 15.0 mW (I = 86 mA), 25 °C	\$663.00	Today

[Hide 633 - 685 nm Pigtails](#)

### 633 - 685 nm Pigtails

Item #	Info	Wavelength	Power (Typ.) <sup>a</sup>	Typical/Max Drive Current <sup>a</sup>	Pin Code <sup>b</sup>	Package	Compatible Socket	Wavelength Tested	Recommended Mount(s)	Recommended Driver
LP633-SF50		633 nm	50 mW	170 mA / 210 mA	G	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>

LPS-635-FC		635 nm	2.5 mW	70 mA / 95 mA	A	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP635-SF8		635 nm	8 mW	60 mA / 80 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP637-SF70		637 nm	70 mW	220 mA / 300 mA	G	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP642-SF20		642 nm	20 mW	90 mA / 140 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LPS-660-FC		658 nm	7.5 mW	80 mA / 95 mA	C	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LP660-SF20		658 nm	20 mW	80 mA / 110 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP660-SF40		658 nm	40 mW	135 mA / 170 mA	H	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LP660-SF60		658 nm	60 mW	210 mA / 250 mA	H	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LPS-675-FC		670 nm	2.5 mW	55 mA / 90 mA	A	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP685-SF15		685 nm	15 mW	55 mA / 80 mA	C	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>

- Do not exceed the maximum optical power or maximum drive current, whichever occurs first.
- Laser diodes with A, B, C, or D pin codes have a built-in monitor photodiode and therefore support constant power operation.
- This socket is included with the purchase of the corresponding laser diode.
- The ITC4001 driver is only necessary if the LDM9LP mount or a custom mount is used, as the CLD1010LP and CLD1011LP are each a combined mount and driver.

Part Number	Description	Price	Availability
LP633-SF50	NEW! 633 nm, 50 mW, G Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$825.00	Today
LP633-SF50	NEW! CWL = 633.4 nm, P = 50.0 mW (I = 149 mA), 25 °C	\$825.00	Today
LP633-SF50	NEW! CWL = 633.7 nm, P = 50.0 mW (I = 170 mA), 25 °C	\$825.00	Today
LPS-635-FC	635 nm, 2.5 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$364.00	Today
LPS-635-FC	CWL = 636.3 nm, P = 2.5 mW (I = 56 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 636.8 nm, P = 2.5 mW (I = 62 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 636.6 nm, P = 2.5 mW (I = 59 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 636.1 nm, P = 2.5 mW (I = 52 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 636.3 nm, P = 2.5 mW (I = 52 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 636.6 nm, P = 2.5 mW (I = 53 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 636.7 nm, P = 2.5 mW (I = 54 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 636.6 nm, P = 2.5 mW (I = 52 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 637.3 nm, P = 2.5 mW (I = 54 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 637.3 nm, P = 2.5 mW (I = 54 mA), 25 °C	\$364.00	Today
LPS-635-FC	CWL = 637.7 nm, P = 2.5 mW (I = 55 mA), 25 °C	\$364.00	Today
LPS-635-FC		\$364.00	Today
LP635-SF8	635 nm, 8.0 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$599.00	Today
LP635-SF8	CWL = 639.2 nm, P = 8.0 mW (I = 79 mA), 25 °C	\$599.00	Today
LP635-SF8	CWL = 639.2 nm, P = 8.0 mW (I = 81 mA), 25 °C	\$599.00	Today
LP635-SF8	CWL = 638.9 nm, P = 8.0 mW (I = 80 mA), 25 °C	\$599.00	Today
LP635-SF8	CWL = 639.1 nm, P = 8.0 mW (I = 76 mA), 25 °C	\$599.00	Today
LP635-SF8	CWL = 639.1 nm, P = 8.0 mW (I = 77 mA), 25 °C	\$599.00	Today
LP635-SF8	CWL = 638.9 nm, P = 8.0 mW (I = 79 mA), 25 °C	\$599.00	Today
LP635-SF8	CWL = 639.4 nm, P = 8.0 mW (I = 77 mA), 25 °C	\$599.00	Today

LP635-SF8	CWL = 638.2 nm, P = 8.0 mW (I = 76 mA), 25 °C	\$599.00	Today
LP635-SF8	CWL = 639.3 nm, P = 8.0 mW (I = 74 mA), 25 °C	\$599.00	Today
LP637-SF70	637 nm, 70 mW, G Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$729.00	Today
LP637-SF70	CWL = 637.6 nm, P = 70.0 mW (I = 205 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.6 nm, P = 70.0 mW (I = 197 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.7 nm, P = 70.0 mW (I = 203 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.8 nm, P = 70.0 mW (I = 202 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.8 nm, P = 70.0 mW (I = 192 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.4 nm, P = 70.0 mW (I = 200 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 638.0 nm, P = 70.0 mW (I = 212 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.6 nm, P = 70.0 mW (I = 199 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.9 nm, P = 70.0 mW (I = 208 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.9 nm, P = 70.0 mW (I = 212 mA), 25 °C	\$729.00	Today
LP637-SF70	CWL = 637.8 nm, P = 70.0 mW (I = 222 mA), 25 °C	\$729.00	Today
LP637-SF70		\$729.00	Today
LP642-SF20	642 nm, 20 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$563.20	Today
LP642-SF20	CWL = 641.8 nm, P = 20.0 mW (I = 93 mA), 25 °C	\$563.20	3-5 Days
LP642-SF20	CWL = 642.2 nm, P = 20.0 mW (I = 100 mA), 25 °C	\$563.20	3-5 Days
LP642-SF20	CWL = 642.7 nm, P = 20.0 mW (I = 103 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 643.1 nm, P = 20.0 mW (I = 106 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.6 nm, P = 20.0 mW (I = 100 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.7 nm, P = 20.0 mW (I = 99 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.9 nm, P = 20.0 mW (I = 116 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 643.6 nm, P = 20.0 mW (I = 116 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 643.4 nm, P = 20.0 mW (I = 120 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.9 nm, P = 20.0 mW (I = 110 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.8 nm, P = 20.0 mW (I = 105 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.9 nm, P = 20.0 mW (I = 95 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 643.0 nm, P = 20.0 mW (I = 96 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 643.1 nm, P = 20.0 mW (I = 118 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 641.8 nm, P = 20.0 mW (I = 110 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.0 nm, P = 20.0 mW (I = 105 mA), 25 °C	\$563.20	Today
LP642-SF20	CWL = 642.2 nm, P = 20.0 mW (I = 113 mA), 25 °C	\$563.20	3-5 Days
LP642-SF20	CWL = 642.1 nm, P = 20.0 mW (I = 117 mA), 25 °C	\$563.20	3-5 Days
LP642-SF20	CWL = 643.9 nm, P = 20.0 mW (I = 109 mA), 25 °C	\$563.20	3-5 Days
LPS-660-FC	658 nm, 7.5 mW, C Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$386.75	3-5 Days
LPS-660-FC	CWL = 657.6 nm, P = 7.5 mW (I = 80 mA), 25 °C	\$386.75	3-5 Days
LPS-660-FC	CWL = 657.2 nm, P = 7.5 mW (I = 78 mA), 25 °C	\$386.75	3-5 Days
LPS-660-FC	CWL = 657.4 nm, P = 7.5 mW (I = 73 mA), 25 °C	\$386.75	3-5 Days
LPS-660-FC	CWL = 657.5 nm, P = 7.5 mW (I = 77 mA), 25 °C	\$386.75	3-5 Days
LPS-660-FC	CWL = 657.0 nm, P = 7.5 mW (I = 75 mA), 25 °C	\$386.75	3-5 Days
LPS-660-FC	CWL = 658.0 nm, P = 7.5 mW (I = 85 mA), 25 °C	\$386.75	3-5 Days
LP660-SF20	658 nm, 20 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$428.80	Today
LP660-SF20	CWL = 662.2 nm, P = 20.0 mW (I = 107 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.9 nm, P = 20.0 mW (I = 104 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.8 nm, P = 20.0 mW (I = 92 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.3 nm, P = 20.0 mW (I = 105 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.1 nm, P = 20.0 mW (I = 98 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.5 nm, P = 20.0 mW (I = 92 mA), 25 °C	\$428.80	Today



LP660-SF20	CWL = 662.3 nm, P = 20.0 mW (I = 87 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.3 nm, P = 20.0 mW (I = 98 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.0 nm, P = 20.0 mW (I = 93 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.1 nm, P = 20.0 mW (I = 100 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.3 nm, P = 20.0 mW (I = 97 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.8 nm, P = 20.0 mW (I = 91 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.0 nm, P = 20.0 mW (I = 94 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.9 nm, P = 20.0 mW (I = 92 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.7 nm, P = 20.0 mW (I = 87 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.6 nm, P = 20.0 mW (I = 91 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.9 nm, P = 20.0 mW (I = 91 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.8 nm, P = 20.0 mW (I = 103 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.5 nm, P = 20.0 mW (I = 102 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 662.1 nm, P = 20.0 mW (I = 90 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.5 nm, P = 20.0 mW (I = 93 mA), 25 °C	\$428.80	Today
LP660-SF20	CWL = 661.5 nm, P = 20.0 mW (I = 89 mA), 25 °C	\$428.80	Today
LP660-SF40	658 nm, 40 mW, H Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$607.00	Today
LP660-SF40	CWL = 660.5 nm, P = 40.0 mW (I = 141 mA), 25 °C	\$607.00	3-5 Days
LP660-SF40	CWL = 659.4 nm, P = 40.0 mW (I = 130 mA), 25 °C	\$607.00	Today
LP660-SF40	CWL = 659.1 nm, P = 40.0 mW (I = 134 mA), 25 °C	\$607.00	Today
LP660-SF40	CWL = 658.8 nm, P = 40.0 mW (I = 129 mA), 25 °C	\$607.00	Today
LP660-SF60	658 nm, 60 mW, H Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$658.00	Today
LP660-SF60	CWL = 660.4 nm, P = 60.0 mW (I = 195 mA), 25 °C	\$658.00	3-5 Days
LP660-SF60	CWL = 660.3 nm, P = 60.0 mW (I = 210 mA), 25 °C	\$658.00	Today
LP660-SF60	CWL = 659.1 nm, P = 60.0 mW (I = 213 mA), 25 °C	\$658.00	Today
LPS-675-FC	670 nm, 2.5 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$455.00	Today
LPS-675-FC	CWL = 675.9 nm, P = 2.5 mW (I = 34 mA), 25 °C	\$455.00	3-5 Days
LPS-675-FC	CWL = 676.7 nm, P = 2.5 mW (I = 37 mA), 25 °C	\$455.00	3-5 Days
LPS-675-FC	CWL = 674.7 nm, P = 2.5 mW (I = 41 mA), 25 °C	\$455.00	Today
LPS-675-FC	CWL = 674.5 nm, P = 2.5 mW (I = 36 mA), 25 °C	\$455.00	Today
LPS-675-FC	CWL = 674.9 nm, P = 2.5 mW (I = 44 mA), 25 °C	\$455.00	Today
LPS-675-FC	CWL = 676.3 nm, P = 2.5 mW (I = 39 mA), 25 °C	\$455.00	Today
LPS-675-FC	CWL = 675.6 nm, P = 2.5 mW (I = 42 mA), 25 °C	\$455.00	Today
LP685-SF15	685 nm, 15 mW, C Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$524.00	Today
LP685-SF15	CWL = 685.9 nm, P = 15.0 mW (I = 64 mA), 25 °C	\$524.00	3-5 Days
LP685-SF15	CWL = 685.9 nm, P = 15.0 mW (I = 58 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 685.9 nm, P = 15.0 mW (I = 54 mA), 25 °C	\$524.00	3-5 Days
LP685-SF15	CWL = 686.3 nm, P = 15.0 mW (I = 59 mA), 25 °C	\$524.00	3-5 Days
LP685-SF15	CWL = 686.5 nm, P = 15.0 mW (I = 57 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 686.0 nm, P = 15.0 mW (I = 61 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 687.0 nm, P = 15.0 mW (I = 64 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 685.9 nm, P = 15.0 mW (I = 56 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 685.8 nm, P = 15.0 mW (I = 60 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 685.9 nm, P = 15.0 mW (I = 59 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 688.5 nm, P = 15.0 mW (I = 56 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 688.7 nm, P = 15.0 mW (I = 64 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 689.1 nm, P = 15.0 mW (I = 59 mA), 25 °C	\$524.00	Today
LP685-SF15	CWL = 689.1 nm, P = 15.0 mW (I = 59 mA), 25 °C	\$524.00	Today

[Hide 700 - 1100 nm Pigtailed](#)**700 - 1100 nm Pigtailed**

Item #	Info	Wavelength	Power (Typ.) <sup>a</sup>	Typical/Max Drive Current <sup>a</sup>	Pin Code <sup>b</sup>	Package	Compatible Socket	Wavelength Tested	Recommended Mount(s)	Recommended Driver
LP705-SF15		705 nm	15 mW	55 mA / 80 mA	C	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LP730-SF15		730 nm	15 mW	70 mA / 100 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LPS-785-FC		785 nm	10 mW	65 mA / 90 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP785-SF20		785 nm	20 mW	85 mA / 120 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP785-SF100		785 nm	100 mW	300 mA / 450 mA	H	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LP808-SF30		808 nm	30 mW	110 mA / 150 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP808-SA40		808 nm	40 mW	140 mA / 200 mA	A	Ø9 mm SM Pigtail, FC/APC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP820-SF80		820 nm	80 mW	230 mA / 400 mA	C	Ø9 mm SM Pigtail, FC/APC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LPS-830-FC		830 nm	10 mW	50 mA / 80 mA	C	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1011LP	ITC4001 <sup>d</sup>
LP830-SF30		830 nm	30 mW	115 mA / 160 mA	A	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP852-SF30		852 nm	30 mW	115 mA / 160 mA	A	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP880-SF3		880 nm	3 mW	25 mA / 40 mA	A	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP915-SF40		915 nm	40 mW	130 mA / 200 mA	A	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP940-SF30		940 nm	30 mW	90 mA / 120 mA	A	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LP980-SF15		980 nm	15 mW	70 mA / 90 mA	E	Ø5.6 mm SM Pigtail, FC/PC	S7060R <sup>c</sup>	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>
LPS-1060-FC		1064 nm	50 mW	220 mA / 300 mA	A	Ø9 mm SM Pigtail, FC/PC	S8060 or S8060-4	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>d</sup>

- Do not exceed the maximum optical power or maximum drive current, whichever occurs first.
- Laser diodes with A, B, C, or D pin codes have a built-in monitor photodiode and therefore support constant power operation.
- This socket is included with the purchase of the corresponding laser diode.
- The ITC4001 driver is only necessary if the LDM9LP mount or a custom mount is used, as the CLD1010LP and CLD1011LP are each a combined mount and driver.

Part Number	Description	Price	Availability
LP705-SF15	705 nm, 15 mw, C Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$806.00	Today
LP705-SF15	CWL = 698.5 nm, P = 15.0 mW (I = 61 mA), 25 °C	\$806.00	Today
LP705-SF15	CWL = 699.2 nm, P = 15.0 mW (I = 64 mA), 25 °C	\$806.00	Today
LP730-SF15	NEW! 730 nm, 15 mw, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$750.00	Today
LP730-SF15	NEW! CWL = 724.7 nm, P = 15.0 mW (I = 61 mA), 25 °C	\$750.00	Today
LP730-SF15	NEW! CWL = 725.3 nm, P = 15.0 mW (I = 63 mA), 25 °C	\$750.00	Today
LP730-SF15	NEW! CWL = 726.7 nm, P = 15.0 mW (I = 70 mA), 25 °C	\$750.00	Today
LP730-SF15	NEW! CWL = 725.8 nm, P = 15.0 mW (I = 65 mA), 25 °C	\$750.00	Today



LPS-785-FC	785 nm, 10 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$428.00	Today
LPS-785-FC	CWL = 777.1 nm, P = 10.0 mW (I = 59 mA), 25 °C	\$428.00	3-5 Days
LPS-785-FC	CWL = 777.8 nm, P = 10.0 mW (I = 45 mA), 25 °C	\$428.00	3-5 Days
LPS-785-FC	CWL = 776.6 nm, P = 10.0 mW (I = 63 mA), 25 °C	\$428.00	3-5 Days
LPS-785-FC	CWL = 785.7 nm, P = 10.0 mW (I = 46 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 785.4 nm, P = 10.0 mW (I = 49 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 785.6 nm, P = 10.0 mW (I = 46 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 786.1 nm, P = 10.0 mW (I = 45 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 786.0 nm, P = 10.0 mW (I = 53 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 786.0 nm, P = 10.0 mW (I = 49 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 785.5 nm, P = 10.0 mW (I = 44 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 784.7 nm, P = 10.0 mW (I = 51 mA), 25 °C	\$428.00	Today
LPS-785-FC	CWL = 784.8 nm, P = 10.0 mW (I = 47 mA), 25 °C	\$428.00	Today
LP785-SF20	785 nm, 20 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$495.00	Today
LP785-SF20	CWL = 785.7 nm, P = 20.0 mW (I = 95 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 784.9 nm, P = 20.0 mW (I = 74 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.8 nm, P = 20.0 mW (I = 84 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.3 nm, P = 20.0 mW (I = 74 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.9 nm, P = 20.0 mW (I = 93 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.6 nm, P = 20.0 mW (I = 65 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 786.0 nm, P = 20.0 mW (I = 68 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 786.0 nm, P = 20.0 mW (I = 64 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.5 nm, P = 20.0 mW (I = 69 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.9 nm, P = 20.0 mW (I = 79 mA), 25 °C	\$495.00	3-5 Days
LP785-SF20	CWL = 785.5 nm, P = 20.0 mW (I = 74 mA), 25 °C	\$495.00	3-5 Days
LP785-SF20	CWL = 785.7 nm, P = 20.0 mW (I = 74 mA), 25 °C	\$495.00	3-5 Days
LP785-SF20	CWL = 785.9 nm, P = 20.0 mW (I = 65 mA), 25 °C	\$495.00	3-5 Days
LP785-SF20	CWL = 785.8 nm, P = 20.0 mW (I = 57 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.5 nm, P = 20.0 mW (I = 64 mA), 25 °C	\$495.00	Today
LP785-SF20	CWL = 785.7 nm, P = 20.0 mW (I = 65 mA), 25 °C	\$495.00	Today
LP785-SF100	785 nm, 100 mW, H Pin Code, SM Fiber Pigtailed Laser Diode, FC/PC	\$968.00	Today
LP785-SF100	CWL = 787.2 nm, P = 100.0 mW (I = 318 mA), 25 °C	\$968.00	Today
LP785-SF100	CWL = 787.1 nm, P = 100.0 mW (I = 336 mA), 25 °C	\$968.00	Today
LP785-SF100	CWL = 787.1 nm, P = 100.0 mW (I = 292 mA), 25 °C	\$968.00	Today
LP808-SF30	808 nm, 30 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$704.00	Lead Time
LP808-SA40	808 nm, 40 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/APC	\$735.00	Lead Time
LP820-SF80	NEW! 820 nm, 80 mW, C Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$850.00	Today
LP820-SF80	NEW! CWL = 820.7 nm, P = 80.0 mW (I = 238 mA), 25 °C	\$850.00	Today
LPS-830-FC	830 nm, 10 mW, C Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$504.00	Today
LPS-830-FC	CWL = 826.7 nm, P = 10.0 mW (I = 45 mA), 25 °C	\$504.00	3-5 Days
LPS-830-FC	CWL = 827.0 nm, P = 10.0 mW (I = 46 mA), 25 °C	\$504.00	Today
LPS-830-FC	CWL = 826.9 nm, P = 10.0 mW (I = 42 mA), 25 °C	\$504.00	Today
LPS-830-FC	CWL = 827.0 nm, P = 10.0 mW (I = 41 mA), 25 °C	\$504.00	Today
LPS-830-FC	CWL = 827.3 nm, P = 10.0 mW (I = 45 mA), 25 °C	\$504.00	Today
LP830-SF30	830 nm, 30 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$704.00	Today
LP830-SF30	CWL = 824.5 nm, P = 30.0 mW (I = 138 mA), 25 °C	\$704.00	3-5 Days
LP830-SF30	CWL = 823.6 nm, P = 30.0 mW (I = 143 mA), 25 °C	\$704.00	Today
LP830-SF30		\$704.00	Today
LP830-SF30	CWL = 827.0 nm, P = 30.0 mW (I = 122 mA), 25 °C	\$704.00	Today

LP830-SF30	CWL = 825.2 nm, P = 30.0 mW (I = 96 mA), 25 °C	\$704.00	Today
LP852-SF30	852 nm, 30 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$704.00	Today
LP852-SF30	CWL = 848.8 nm, P = 30.0 mW (I = 87 mA), 25 °C	\$704.00	3-5 Days
LP852-SF30	CWL = 846.0 nm, P = 30.0 mW (I = 110 mA), 25 °C	\$704.00	Today
LP852-SF30	CWL = 849.8 nm, P = 30.0 mW (I = 96 mA), 25 °C	\$704.00	Today
LP852-SF30	CWL = 846.2 nm, P = 30.0 mW (I = 86 mA), 25 °C	\$704.00	Today
LP880-SF3	880 nm, 3 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$465.00	Today
LP880-SF3	CWL = 881.8 nm, P = 3.0 mW (I = 17 mA), 25 °C	\$465.00	3-5 Days
LP880-SF3	CWL = 880.5 nm, P = 3.0 mW (I = 17 mA), 25 °C	\$465.00	3-5 Days
LP880-SF3	CWL = 881.5 nm, P = 3.0 mW (I = 19 mA), 25 °C	\$465.00	Today
LP880-SF3	CWL = 881.3 nm, P = 3.0 mW (I = 22 mA), 25 °C	\$465.00	Today
LP880-SF3	CWL = 881.1 nm, P = 3.0 mW (I = 16 mA), 25 °C	\$465.00	Today
LP915-SF40	915 nm, 40 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$735.00	Today
LP915-SF40	CWL = 912.3 nm, P = 40.0 mW (I = 149 mA), 25 °C	\$735.00	Today
LP915-SF40	CWL = 913.8 nm, P = 40.0 mW (I = 122 mA), 25 °C	\$735.00	Today
LP915-SF40	CWL = 913.2 nm, P = 40.0 mW (I = 170 mA), 25 °C	\$735.00	Today
LP915-SF40	CWL = 911.6 nm, P = 40.0 mW (I = 112 mA), 25 °C	\$735.00	Today
LP940-SF30	940 nm, 30 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$563.20	Today
LP940-SF30		\$563.20	Today
LP940-SF30	CWL = 932.8 nm, P = 30.0 mW (I = 99 mA), 25 °C	\$563.20	Today
LP940-SF30	CWL = 933.2 nm, P = 30.0 mW (I = 124 mA), 25 °C	\$563.20	3-5 Days
LP980-SF15	980 nm, 15 mW, E Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$454.00	Today
LP980-SF15	CWL = 981.8 nm, P = 15.0 mW (I = 63 mA), 25 °C	\$454.00	Today
LP980-SF15	CWL = 974.2 nm, P = 15.0 mW (I = 60 mA), 25 °C	\$454.00	Today
LP980-SF15	CWL = 980.5 nm, P = 15.0 mW (I = 51 mA), 25 °C	\$454.00	Today
LP980-SF15	CWL = 981.1 nm, P = 15.0 mW (I = 60 mA), 25 °C	\$454.00	Today
LP980-SF15	CWL = 981.3 nm, P = 15.0 mW (I = 54 mA), 25 °C	\$454.00	Today
LPS-1060-FC	1064 nm, 50 mW, A Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$939.00	Today
LPS-1060-FC	CWL = 1063.4 nm, P = 50.0 mW (I = 186 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1066.7 nm, P = 50.0 mW (I = 139 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1062.1 nm, P = 50.0 mW (I = 156 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1058.9 nm, P = 50.0 mW (I = 207 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1059.8 nm, P = 50.0 mW (I = 172 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1061.9 nm, P = 50.0 mW (I = 169 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1062.2 nm, P = 50.0 mW (I = 159 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1063.7 nm, P = 50.0 mW (I = 169 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1063.9 nm, P = 50.0 mW (I = 166 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1065.3 nm, P = 50.0 mW (I = 157 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1065.9 nm, P = 50.0 mW (I = 154 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1067.3 nm, P = 50.0 mW (I = 162 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1060.5 nm, P = 50.0 mW (I = 183 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1058.5 nm, P = 50.0 mW (I = 138 mA), 25 °C	\$939.00	Today
LPS-1060-FC	CWL = 1063.9 nm, P = 50.0 mW (I = 213 mA), 25 °C	\$939.00	3-5 Days

[Hide 1310 nm Pigtailed](#)

### 1310 nm Pigtailed

			Power	Typical/Max Drive	Pin		Compatible	Wavelength	Recommended	Recommended
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Item #	Info	Wavelength	(Typ.) <sup>a</sup>	Current <sup>a</sup>	Code <sup>b</sup>	Package	Socket	Tested	Mounts	Driver
LPS-1310-FC		1310 nm	2.5 mW	20 mA / 35 mA	D	Ø5.6 mm SM Pigtail, FC/PC	-	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>c</sup>
LPSC-1310-FC		1310 nm	50 mW	350 mA / 500 mA	E	Ø5.6 mm SM Pigtail, FC/PC	S7060R	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>c</sup>

- Do not exceed the maximum optical power or maximum drive current, whichever occurs first.
- Laser diodes with A, B, C, or D pin codes have a built-in monitor photodiode and therefore support constant power operation.
- The ITC4001 driver is only necessary if the LDM9LP mount or a custom mount is used, as the CLD1010LP is both a mount and a driver.

Part Number	Description	Price	Availability
LPS-1310-FC	1310 nm, 2.5 mW, D Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$455.00	Today
LPS-1310-FC	CWL = 1301.9 nm, P = 2.5 mW (I = 18 mA), 25 °C	\$455.00	Today
LPS-1310-FC	CWL = 1302.0 nm, P = 2.5 mW (I = 25 mA), 25 °C	\$455.00	Today
LPS-1310-FC	CWL = 1303.2 nm, P = 2.5 mW (I = 19 mA), 25 °C	\$455.00	Today
LPS-1310-FC	CWL = 1301.8 nm, P = 2.5 mW (I = 18 mA), 25 °C	\$455.00	Today
LPS-1310-FC	CWL = 1301.8 nm, P = 2.5 mW (I = 19 mA), 25 °C	\$455.00	Today
LPS-1310-FC	CWL = 1303.1 nm, P = 2.5 mW (I = 22 mA), 25 °C	\$455.00	Today
LPS-1310-FC	CWL = 1300.7 nm, P = 2.5 mW (I = 20 mA), 25 °C	\$455.00	Today
LPS-1310-FC	CWL = 1303.5 nm, P = 2.5 mW (I = 20 mA), 25 °C	\$455.00	Today
LPSC-1310-FC	1310 nm, 50 mW, E Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$634.00	Today
LPSC-1310-FC	CWL = 1313.1 nm, P = 50.0 mW (I = 253 mA), 25 °C	\$634.00	3-5 Days
LPSC-1310-FC	CWL = 1313.2 nm, P = 50.0 mW (I = 250 mA), 25 °C	\$634.00	3-5 Days
LPSC-1310-FC	CWL = 1306.0 nm, P = 50.0 mW (I = 320 mA), 25 °C	\$634.00	Today
LPSC-1310-FC	CWL = 1308.2 nm, P = 50.0 mW (I = 318 mA), 25 °C	\$634.00	Today
LPSC-1310-FC	CWL = 1306.4 nm, P = 50.0 mW (I = 306 mA), 25 °C	\$634.00	Today
LPSC-1310-FC	CWL = 1306.5 nm, P = 50.0 mW (I = 293 mA), 25 °C	\$634.00	Today

[Hide 1550 nm Pigtailed](#)

### 1550 nm Pigtailed

Item #	Info	Wavelength	Power (Typ.) <sup>a</sup>	Typical/Max Drive Current <sup>a</sup>	Pin Code <sup>b</sup>	Package	Compatible Socket	Wavelength Tested	Recommended Mounts	Recommended Driver
LPS-1550-FC		1550 nm	1.5 mW	30 mA / 50 mA	D	Ø5.6 mm SM Pigtail, FC/PC	-	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>c</sup>
LPSC-1550-FC		1550 nm	50 mW	250 mA / 500 mA	E	Ø5.6 mm SM Pigtail, FC/PC	S7060R	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>c</sup>


- Do not exceed the maximum optical power or maximum drive current, whichever occurs first.
- Laser diodes with A, B, C, or D pin codes have a built-in monitor photodiode and therefore support constant power operation.
- The ITC4001 driver is only necessary if the LDM9LP mount or a custom mount is used, as the CLD1010LP is both a mount and a driver.

Part Number	Description	Price	Availability
LPS-1550-FC	1550 nm, 1.5 mW, D Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$545.00	Today
LPS-1550-FC	CWL = 1540.5 nm, P = 1.5 mW (I = 23 mA), 25 °C	\$545.00	Today
LPS-1550-FC	CWL = 1542.5 nm, P = 1.5 mW (I = 22 mA), 25 °C	\$545.00	Today
LPS-1550-FC	CWL = 1541.9 nm, P = 1.5 mW (I = 24 mA), 25 °C	\$545.00	Today
LPS-1550-FC	CWL = 1549.8 nm, P = 1.5 mW (I = 24 mA), 25 °C	\$545.00	Today
LPS-1550-FC	CWL = 1549.0 nm, P = 1.5 mW (I = 24 mA), 25 °C	\$545.00	Today
LPS-1550-FC	CWL = 1549.3 nm, P = 1.5 mW (I = 24 mA), 25 °C	\$545.00	Today

LPSC-1550-FC	1550 nm, 50 mW, E Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$699.00	Today
LPSC-1550-FC	CWL = 1554.6 nm, P = 50.0 mW (I = 415 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1553.7 nm, P = 50.0 mW (I = 420 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1556.7 nm, P = 50.0 mW (I = 456 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1551.1 nm, P = 50.0 mW (I = 429 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1553.1 nm, P = 50.0 mW (I = 478 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1549.4 nm, P = 50.0 mW (I = 404 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1546.9 nm, P = 50.0 mW (I = 402 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1555.7 nm, P = 50.0 mW (I = 460 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1553.6 nm, P = 50.0 mW (I = 459 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1551.8 nm, P = 50.0 mW (I = 459 mA), 25 °C	\$699.00	Today
LPSC-1550-FC	CWL = 1555.1 nm, P = 50.0 mW (I = 429 mA), 25 °C	\$699.00	3-5 Days
LPSC-1550-FC	CWL = 1545.7 nm, P = 50.0 mW (I = 427 mA), 25 °C	\$699.00	3-5 Days

[Hide 1620 - 1650 nm Pigtailed](#)

### 1620 - 1650 nm Pigtailed

Item #	Info	Wavelength	Power (Typ.) <sup>a</sup>	Typical/Max Drive Current <sup>a</sup>	Pin Code <sup>b</sup>	Package	Compatible Socket	Wavelength Tested	Recommended Mounts	Recommended Driver
LPSC-1625-FC		1625 nm	50 mW	350 mA / 500 mA	E	Ø5.6 mm SM Pigtail, FC/PC	S7060R	Yes	LDM9LP or CLD1010LP	ITC4001 <sup>c</sup>

- Do not exceed the maximum optical power or maximum drive current, whichever occurs first.
- Laser diodes with A, B, C, or D pin codes have a built-in monitor photodiode and therefore support constant power operation.
- The ITC4001 driver is only necessary if the LDM9LP mount or a custom mount is used, as the CLD1010LP is both a mount and a driver.

Part Number	Description	Price	Availability
LPSC-1625-FC	1625 nm, 50 mW, E Pin Code, SM Fiber-Pigtailed Laser Diode, FC/PC	\$699.00	3-5 Days

Visit the *Pigtailed Laser Diodes, Single Mode Fiber* page for pricing and availability information:

[https://www.thorlabs.com/newgroupage9\\_pf.cfm?objectgroup\\_id=1489](https://www.thorlabs.com/newgroupage9_pf.cfm?objectgroup_id=1489)

## Specifications

## Fiber Specs

## Drawings

Optical Electrical Characteristics ( $T_{CASE} = 25\text{ }^{\circ}\text{C}$ ,  $P = 30\text{ mW}$ )

Characteristic	MIN	TYP	MAX	UNIT
Center Wavelength	400	405	410	nm
Optical Output Power (CW)	-	30	35	mW
Operating Voltage	-	5.0	6.5	V
Operating Current	-	100	150	mA
Threshold Current	-	30	40	mA
Slope Efficiency	0.20	0.40	-	W/A

Absolute Maximum Ratings<sup>a</sup>

Characteristic		
Fiber Output Power	35	mW
LD Reverse Voltage	5	V
Operating Temperature	0 to 50	$^{\circ}\text{C}$
Storage Temperature	-10 to 65	$^{\circ}\text{C}$

- a. Absolute Maximum Rating specifications should never be exceeded. Operating beyond these conditions can seriously damage the laser. For more information, please see the [Laser Diode Tutorial](#).

## General Specifications

Characteristic	Value
Monitor Photodiode	No
Package	$\varnothing 5.6\text{ mm}$ SM Pigtail, FC/PC
Pin Code	G
Compatible Socket	<a href="#">S7060R<sup>a</sup></a>
Recommended Mounts	<a href="#">LDM9LP</a> or <a href="#">CLD1010LP</a>
Recommended Driver	<a href="#">ITC4001<sup>b</sup></a>
Spatial Mode	Single Mode
Wavelength Tested	Yes

- a. This socket is included with the purchase of the corresponding laser diode.  
 b. The [ITC4001](#) driver is only necessary if the [LDM9LP](#) mount or a custom mount is used, as the [CLD1010LP](#) and [CLD1011LP](#) are each a combined mount and driver.



Auto CAD  
PDF



Auto CAD  
DXF



Solidworks



eDrawing



Step



Spec  
Sheet

Fiber Specifications	
Fiber Type	S405-XP
Mode Field Diameter <sup>a</sup>	3.6 ± 0.5 μm at 405 nm
Numerical Aperture	0.12
Fiber Length	1 m
Connector	FC/PC, 2.0 mm Narrow Key

a. Mode Field Diameter (MFD) is specified as a nominal value.

