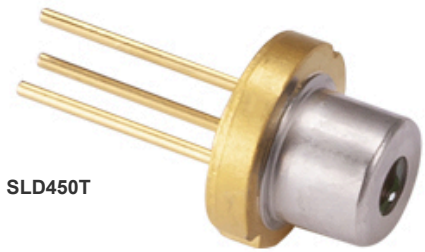
SLD635T - November 14, 2025

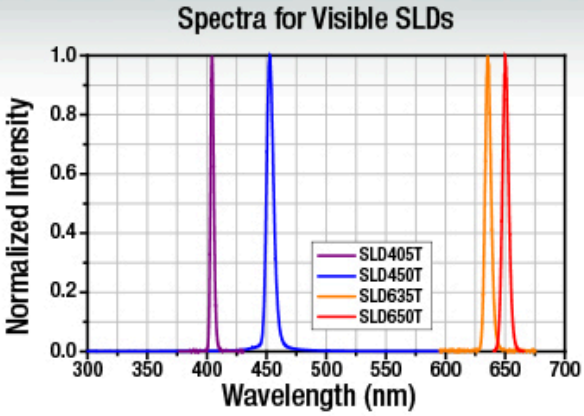
Item # SLD635T was discontinued on November 14, 2025. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

VISIBLE SUPERLUMINESCENT DIODES (SLDS), TO-56 CAN

- ► Ø5.6 mm TO Can Package with H Pin Codes
- ► Broad Emission with Center Wavelengths from 405 nm to 650 nm
- ► 10 mW Typical Output Power



SLD450T



OVERVIEW

Features

- Center Wavelengths from 405 nm to 650 nm
- 4 nm or 5 nm Typical 3 dB Bandwidth
- Compatible with Thorlabs' Laser Diode Mounts and Controllers (See Table 1.1)

Table 1.1 Recommended Controller / Mount Options

Item #	Mount	Diode Driver	TEC Controller
LDM56	✓	-	-
ITC4000 Series	Use with LDM56 Mount	✓	✓
LDC200 Series	Use with LDM56 Mount	✓	-
TED200C	Use with LDM56 Mount	-	✓

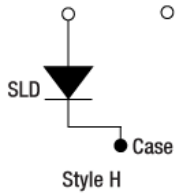


Figure 1.2 The pin code indicates which mounts and diodes are compatible. The drawing does not represent an exact wiring diagram.

Superluminescent Diodes (SLDs) are excellent high-power, broadband light sources that are ideal for use in applications such as display technology, holography, metrology, and spectroscopy. When fit into an external cavity, these SLDs can be used as a tunable laser. This page contains Thorlabs' SLDs with center wavelengths from 405 nm to 650 nm that are built into a TO-56 package with pin code H. Visible SLDs in a butterfly package are also available, as well as NIR SLDs for wavelengths from 810 nm to 1550 nm, many of which are ideal for spectral-domain optical coherence tomography.

The SLDs featured on this page are single spatial mode and have a near-Gaussian optical spectrum. More detailed typical specifications for each item, as well as mechanical drawings, are available in Table G1.1.

With an H pin code, these visible SLDs are compatible with Thorlabs' S7060R diode socket and the LDM56 laser diode mount, which has an integrated thermoelectric cooler (TEC). These mounts are compatible with Thorlabs' laser diode and temperature controllers; see Table 1.1 for details. Please note that optical feedback can diminish the output power or damage the SLD and back-reflections should be avoided. SLDs are also sensitive to electrostatic shock, and proper precautions must be taken when handling the device (see our electrostatic shock accessories).

SELECTION GUIDE

Superluminescent Diode Performance:

The rows shaded green below denote SLDs that are suitable for use in OCT systems.

Click on an Item # and then select the Documents tab to find product document download links, including full spec sheets.

Item #	Center Wavelength	Package	Output Power[a]	Bandwidth (3 dB)	Optical Spectrum	LIV Curves[b]	Integrated Isolator	Equivalent Benchtop Source
SLD405B	405 nm	Butterfly, SM Pigtail	5 mW	3 nm			No	No
SLD450B	450 nm	Butterfly, SM Pigtail	5 mW	6 nm			No	No
SLD450T	450 nm	TO-56	10 mW	5 nm			No	No
SLD510B	510 nm	Butterfly, SM Pigtail	1.5 mW	8 nm			No	No
SLD635B	635 nm	Butterfly, SM Pigtail	3 mW	6 nm			No	No
SLD635T	635 nm	TO-56	10 mW	5 nm			No	No
SLD650B	650 nm	Butterfly, SM Pigtail	3 mW	6 nm			No	No
SLD650T	650 nm	TO-56	10 mW	5 nm			No	No
SLD770S	770 nm[c]	Butterfly, SM Pigtail	5.5 mW	18 nm			No	No
SLD810S	810 nm[c]	Butterfly, SM Pigtail	15 mW	30 nm			No	No
SLD830S-A10W	830 nm[c]	Butterfly, SM Pigtail	10 mW (Min)	60 nm			No	No
SLD830S-A20W	830 nm[c]	Butterfly, SM Pigtail	20 mW (Min)	55 nm			No	No
SLD830S-A10	830 nm[c]	Butterfly, SM Pigtail	13 mW	20 nm			No	No
SLD830S-A20	830 nm[c]	Butterfly, SM Pigtail	22 mW	20 nm			No	No
SLD840	840 nm[c]	Butterfly, SM Pigtail	4 mW	70 nm			No	No
SLD840P	840 nm[c]	Butterfly, PM Pigtail	4 mW	70 nm			No	No
SLD850S-A10W	850 nm[c]	Butterfly, SM Pigtail	10 mW (Min)	60 nm			No	No
SLD850S-A20W	850 nm[c]	Butterfly, SM Pigtail	20 mW (Min)	55 nm			No	No
SLD880S-A7	880 nm[c]	Butterfly, SM Pigtail	7 mW	40 nm			No	No
SLD880S-A25	880 nm[c]	Butterfly, SM Pigtail	25 mW	40 nm			No	No
SLD920S	920 nm[c]	Butterfly, SM Pigtail	15 mW	65 nm			No	No
SLD920P	920 nm[c]	Butterfly, PM Pigtail	15 mW	65 nm			No	No
SLD930S-A40W	930 nm[c]	Butterfly, SM Pigtail	40 mW	45 nm			No	No
SLD930P-A40W	930 nm[c]	Butterfly, PM Pigtail	40 mW	45 nm			No	No
SLD970S-A40W	970 nm[c]	Butterfly, SM Pigtail	40 mW	50 nm			No	No
SLD970P-A40W	970 nm[c]	Butterfly, PM Pigtail	40 mW	50 nm			No	No
SLD1050S	1050 nm[c]	Butterfly, SM Pigtail	8 mW	50 nm			No	No
SLD1050P	1050 nm[c]	Butterfly, PM Pigtail	8 mW	50 nm			No	No
SLD1050S-A60	1050 nm[c]	Butterfly, SM Pigtail	60 mW	70 nm			No	No
SLD1050P-A60	1050 nm[c]	Butterfly, PM Pigtail	60 mW	70 nm			No	No
SLD1220	1220 nm[c]	Butterfly, SM Pigtail	5 mW	90 nm			Yes: 50 dB Isolation	No
SLD1220P	1220 nm[c]	Butterfly, PM Pigtail	5 mW	90 nm			Yes: 50 dB Isolation	No

Item #	Center Wavelength	Package	Output Power[a]	Bandwidth (3 dB)	Optical Spectrum	LIV Curves[b]	Integrated Isolator	Equivalent Benchtop Source
SLD1021S	1310 nm[c]	Butterfly, SM Pigtail	12.5 mW	85 nm			No	S5FC1021S
SLD1018S	1310 nm[c]	Butterfly, SM Pigtail	30 mW	45 nm			No	S5FC1018S S5FC1018P
SLD1018P	1310 nm[c]	Butterfly, PM Pigtail	30 mW	45 nm			No	S5FC1018S S5FC1018P
SLD1310	1315 nm[c]	Butterfly, SM Pigtail	30 mW	90 nm			Yes: 50 dB Isolation	No
SLD1310P	1315 nm[c]	Butterfly, PM Pigtail	30 mW	90 nm			Yes: 50 dB Isolation	No
SLD1325	1325 nm[c]	Butterfly, SM Pigtail	10 mW (Min)	100 nm (Min)			Yes: 30 dB (Min) Isolation	No
SLD1330	1325 nm[c]	Butterfly, SM Pigtail	40 mW	90 nm			Yes: 50 dB Isolation	No
SLD1330P	1325 nm[c]	Butterfly, SM Pigtail	40 mW	90 nm			Yes: 50 dB Isolation	No
SLD1410	1400 nm[c]	Butterfly, SM Pigtail	5 mW	98 nm			Yes: 30 dB Isolation	No
SLD1410P	1400 nm[c]	Butterfly, PM Pigtail	5 mW	98 nm			Yes: 30 dB Isolation	No
SLD1450S	1450 nm[c]	Butterfly, SM Pigtail	25 mW	54 nm			No	No
SLD1450P	1450 nm[c]	Butterfly, PM Pigtail	25 mW	54 nm			No	No
SLD1550S-A1	1550 nm[c]	Butterfly, SM Pigtail	1.0 mW	110 nm			No	No
SLD1550P-A1	1550 nm[c]	Butterfly, PM Pigtail	1.0 mW	110 nm			No	No
SLD1550S-A2	1550 nm[c]	Butterfly, SM Pigtail	2.5 mW	90 nm			No	S5FC1550S-A2 S5FC1550P-A2
SLD1550P-A2	1550 nm[c]	Butterfly, PM Pigtail	2.5 mW	90 nm			No	S5FC1550S-A2 S5FC1550P-A2
SLD1005S	1550 nm[c]	Butterfly, SM Pigtail	22 mW	50 nm			No	S5FC1005S
SLD1550S-A40	1550 nm[c]	Butterfly, SM Pigtail	40 mW	33 nm			No	No
SLD1550P-A40	1550 nm[c]	Butterfly, PM Pigtail	40 mW	33 nm			No	No
SLD1610	1610 nm[c]	Butterfly, SM Pigtail	27 mW	57 nm			No	No
SLD1610P	1610 nm[c]	Butterfly, PM Pigtail	27 mW	57 nm			No	No
SLD1690	1685 nm[c]	Butterfly, SM Pigtail	4 mW	85 nm			Yes: 30 dB Isolation	No
SLD1690P	1685 nm[c]	Butterfly, PM Pigtail	4 mW	85 nm			Yes: 30 dB Isolation	No

a. Values are typical unless otherwise noted.
b. Basic superluminescent diode characteristics can be measured by increasing current (I) while measuring the device voltage (V) and light output (L). The resulting data is usually referred to as an LIV curve.
c. For more information on how the center wavelength for our NIR SLDs is defined, please see the *Specs* tab on the NIR Superluminescent Diodes presentation.

Visible Superluminescent Diodes, TO-56 Can

Table G1.1 Specifications								
Item #[a]	Info[b]	Center Wavelength	Power	Forward Current (Max)	3 dB Bandwidth	Pin Code	Spectral Shape	Spatial Mode
SLD405T		405 nm	10 mW	110 mA	4 nm	H	Near Gaussian	Single Mode
SLD450T		450 nm	10 mW	180 mA	5 nm			
SLD635T		635 nm	10 mW	60 mA	5 nm			
SLD650T		650 nm	10 mW	60 mA	5 nm			

a. All values are typical unless otherwise indicated.
b. Additional specifications are available by clicking on the blue icon.

Part Number	Description	Price	Availability
SLD405T	**405 nm, 10 mW, TO-56, H Pin Code, Superluminescent Diode**	**$1,630.38**	**In Stock Overseas**
SLD450T	**450 nm, 10 mW, TO-56, H Pin Code, Superluminescent Diode**	**$1,630.38**	**In Stock Overseas**
SLD635T	**635 nm, 10 mW, TO-56, H Pin Code, Superluminescent Diode**	**$1,741.96**	**Lead Time**
SLD650T	**650 nm, 10 mW, TO-56, H Pin Code, Superluminescent Diode**	**$864.52**	**In Stock Overseas**

SLD635T - 635 nm, 10 mW, TO-56, H Pin Code, Superluminescent Diode

Specifications | LIV | Spectrum | Drawing

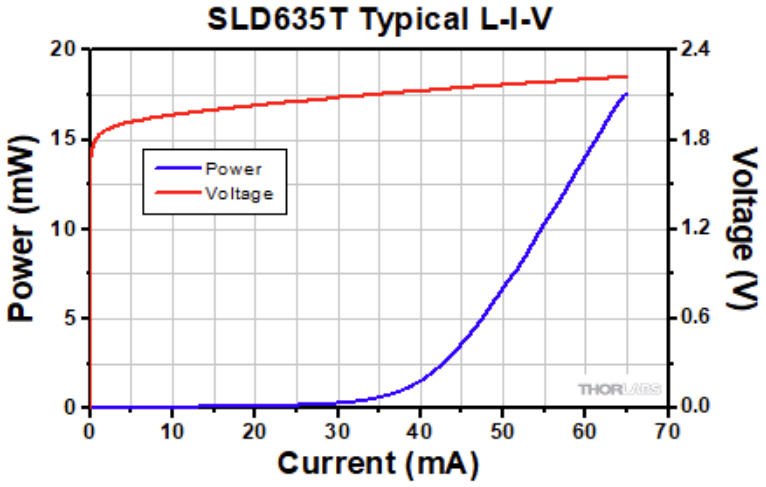
Optical Electrical Characteristics (T_{CASE} = 25 °C)				
Characteristic	Min	Typ.	Max	Unit
Center Wavelength	625	635	645	nm
3 dB Bandwidth	3	5	-	nm
Optical Output Power	5	10	-	mW
Forward Current	-	-	60	mA
Forward Voltage	-	2.3	2.5	V
Slow Axis Farfield (FWHM)[a]	7	9	12	deg.
Fast Axis Farfield (FWHM)[a]	24	27	30	deg.

a. See the *Drawing* tab for the axis orientation with respect to the SLD housing.

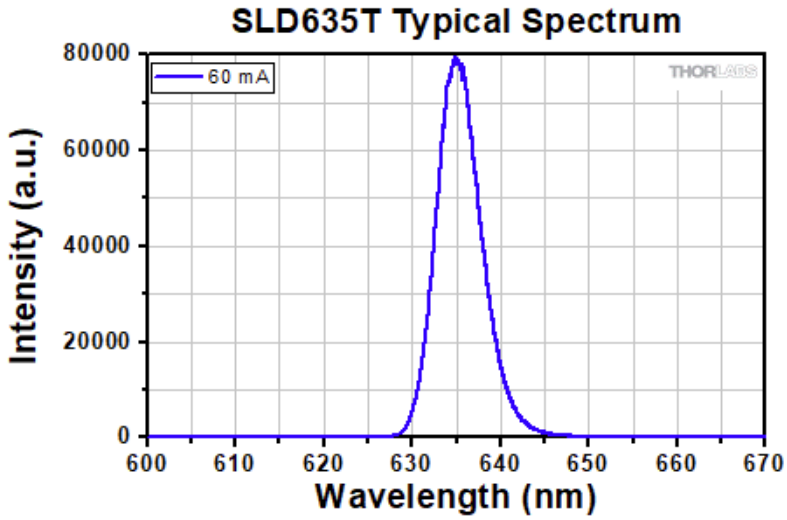
Absolute Maximum Ratings	
Characteristic	Value
Optical Output Power	20 mW
Forward Current	70 mA
Reverse Voltage	-2 V
Forward Voltage	3 V
Storage Temperature	-40 °C to 85 °C

General Specifications	
Characteristic	Value
Monitor Photodiode	No
Package	TO-56
Pin Code	H
Compatible Socket	S7060R
Spatial Mode	Single Mode

Auto CAD PDF | Auto CAD DXF | Solidworks | eDrawing | Step | Spec Sheet



Note: the plot above is typical, and performance will vary between individual SLDs.



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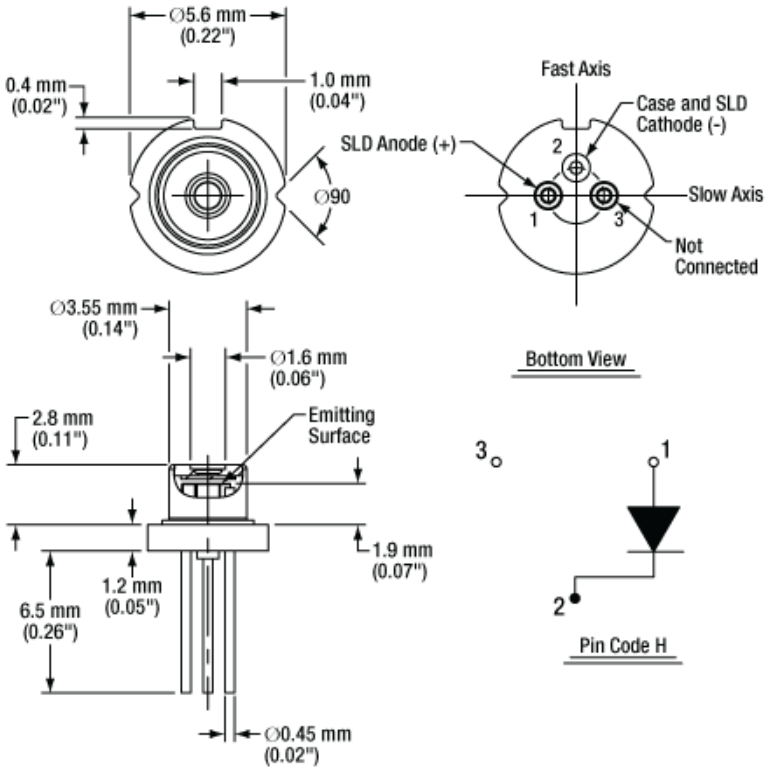
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(0.22")
0.4 mm
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(0.04")
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(0.14")
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Emitting
Surface
1.9 mm
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1.2 mm
(0.05")
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(0.02")
Fast Axis
Case and SLD
Cathode (-)
SLD Anode (+)
Slow Axis
Not
Connected
Bottom View
Pin Code H