



PLC Series – 635nm–980nm Miniature Laser Diode Modules

Circular Beam, Dia. 10.5mm, 3–6VDC



Overview

The Lasermate PLC series laser diode module is a complete laser diode system designed for OEM applications with lowest cost, miniature size, and beam focusing requirements. Additional heat sink may be needed for the laser module under continuously operating for a long period of time. Designed for OEM, the laser is ideal for a wide range of low power laser applications, such as general sighting, leveling, and positioning.

Features

- Wide range of wavelengths from 635nm to 980nm (including 650nm, 670nm, 780nm, 808nm, 850nm, 904nm)
- Different output power levels for different wavelengths
- Basic performance and lowest cost
- Miniature design: Dia. 10.5mm x L. 19.3mm
- Adjustable or fixed focus
- Circular beam profile
- Singlet plastic collimating lens
- Options: Optics generating 4-degree line and 9-degree cross hair available

Applications

- Pointing
- Leveling
- Sensing
- General sighting
- Positioning

Product Overview

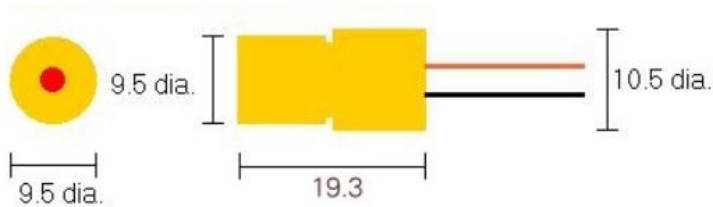
The following table shows the list of available part numbers, wavelength, optical output power, laser class, operating temperature, and focus for PLC series laser modules.

Part Number	Wavelength (nm)	Optical output power (mW)	Laser class	Operating voltage (V DC)	Operating Current typical (mA)	Operating temperature (°C)	Focus
PLC6351AE-B	635	0.5-0.99	II	3-6	40	-10 to +40	Adjustable
PLC6351FE-B	635	0.5-0.99	II	3-6	40	-10 to +40	Fixed
PLC6352AE-B	635	1.2-2	IIIa	3-6	40	-10 to +40	Adjustable
PLC6352FE-B	635	1.2-2	IIIa	3-6	40	-10 to +40	Fixed
PLC6351AE-A	635	0.5-0.99	II	3-6	40	-10 to +50	Adjustable
PLC6351FE-A	635	0.5-0.99	II	3-6	40	-10 to +50	Fixed
PLC6352AE-A	635	1.2-2	IIIa	3-6	40	-10 to +50	Adjustable
PLC6352FE-A	635	1.2-2	IIIa	3-6	40	-10 to +50	Fixed
PLC6501AE-B	650	0.5-0.99	II	3-6	25	-10 to +40	Adjustable
PLC6501FE-B	650	0.5-0.99	II	3-6	25	-10 to +40	Fixed
PLC6502AE-B	650	1.2-2	IIIa	3-6	30	-10 to +40	Adjustable
PLC6502FE-B	650	1.2-2	IIIa	3-6	30	-10 to +40	Fixed
PLC6501AE-A	650	0.5-0.99	II	3-6	25	-10 to +50	Adjustable
PLC6501FE-A	650	0.5-0.99	II	3-6	25	-10 to +50	Fixed
PLC6502AE-A	650	1.2-2	IIIa	3-6	30	-10 to +50	Adjustable
PLC6502FE-A	650	1.2-2	IIIa	3-6	30	-10 to +50	Fixed
PLC6701AE	670	0.5-0.99	II	3-6	40	-10 to +50	Adjustable
PLC6701FE	670	0.5-0.99	II	3-6	40	-10 to +50	Fixed
PLC6702AE	670	1.2-2	IIIa	3-6	40	-10 to +50	Adjustable
PLC6702FE	670	1.2-2	IIIa	3-6	40	-10 to +50	Fixed
PLC7802AE	780	1.2-2	IIIb	3-6	30	-10 to +50	Adjustable
PLC7802FE	780	1.2-2	IIIb	3-6	30	-10 to +50	Fixed
PLC8082AE	808	1.2-2	IIIb	3-6	30	-10 to +40	Adjustable
PLC8082FE	808	1.2-2	IIIb	3-6	30	-10 to +40	Fixed
PLC8502AE	850	1.2-2	IIIb	3-6	30	-10 to +50	Adjustable
PLC8502FE	850	1.2-2	IIIb	3-6	30	-10 to +50	Fixed
PLC8504AE	850	2.4-4	IIIb	3-6	30	-10 to +50	Adjustable
PLC8504FE	850	2.4-4	IIIb	3-6	30	-10 to +50	Fixed
PLC9042AE	904	1.2-2	IIIb	3-6	30	-10 to +50	Adjustable
PLC9042FE	904	1.2-2	IIIb	3-6	30	-10 to +50	Fixed
PLC9804AE	980	2.4-4	IIIb	3-6	45	-10 to +40	Adjustable
PLC9804FE	980	2.4-4	IIIb	3-6	45	-10 to +40	Fixed

Specifications of PLC Series Laser Diode Modules

Wavelength (nm)	635	650	670	780	808	850	904	980
Tolerance	+/-10 nm @ 25 °C							
Laser light	Visible Red				Infrared			
Laser class	Class II <1mW, Class IIIa <5mW				Class IIIb			
Diode structure	Index guided							
Laser diode	5-10mW							
Operating current	25-50mA typical							
Operating voltage	3-6 VDC							
Drive circuit	Regulated APC (automatic power control)							
Optics	Singlet plastic collimating lens							
Beam divergence	< 0.5 mrad							
Beam size @ 5 m	Dia. ~5 mm							
Beam profile	Circular							
Focus	Standard: Adjustable (Optional: Fixed)							
Operating temperature	-10 to +40 °C or -10 to +50 °C							
Connector	Black wire -, red wire + & brass case +							
Dimensions	Brass case: Dia. 10.5mm x L. 19.3mm + PCB: Dia. 8.9mm x H. 3.3mm							
Weight	8 gm typical							

Dimensions of PLC Series Laser Modules (unit: mm)



Additional Notes

- The PLC series laser modules are designated solely as OEM components for incorporation into the customer's end products. Therefore, it is the customer's responsibility to comply with the appropriate requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to [FDA Performance Standards for Light-Emitting Products](#) for detailed information.
- Additional heat sink may be needed if the laser module is operated continuously for a long period of time.
- Specifications are subject to change without notice.



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