



PLG-X9 Series – 635nm-980nm Cross Hair Miniature Laser Diode Modules *With Miniature Size, Adjustable or Fixed Focus, and APC Circuit Design*



Overview

The Lasermate PLG-X9 series laser diode modules with cross hair profile are designed for OEM applications with fine cross hair profile, low cost, miniature size and beam focusing requirements. Additional heat sink may be needed for 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, alignment, and positioning.

Features

- Wide range of wavelengths from 635nm to 980nm (including 650nm, 670nm, 780nm, 808nm, 850nm, 904nm)
- Different output power levels for all wavelengths
- Good performance and low cost
- Automatic Power Control (APC) circuit
- Adjustable or fixed focus
- Miniature design: Dia. 10.5mm x L. 20.5mm
- Beam profile: “+” cross hair
- Beam length: ~16cm @ 1m distance
- Full fan angle: ~9 degrees
- Size of cross lens: Dia. 7mm x T. 1mm

Product Overview

The following table shows the list of available part numbers, wavelength, optical output power, laser class, operating voltage, operating current, and operating temperature for PLG-X9 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
PLG6351AE-BX9	635	0.5-0.99	II	3-6	40	-10 to +40	Adjustable
PLG6351FE-BX9	635	0.5-0.99	II	3-6	40	-10 to +40	Fixed
PLG6354AE-BX9	635	2.5-3.5	IIIa	3-6	40	-10 to +40	Adjustable
PLG6354FE-BX9	635	2.5-3.5	IIIa	3-6	40	-10 to +40	Fixed
PLG6357AE-BX9	635	5-7	IIIb	3-4.5	60	-10 to +40	Adjustable
PLG6357FE-BX9	635	5-7	IIIb	3-4.5	60	-10 to +40	Fixed
PLG6351AE-AX9	635	0.5-0.99	II	3-6	40	-10 to +50	Adjustable
PLG6351FE-AX9	635	0.5-0.99	II	3-6	40	-10 to +50	Fixed
PLG6354AE-AX9	635	2.5-3.5	IIIa	3-6	40	-10 to +50	Adjustable
PLG6354FE-AX9	635	2.5-3.5	IIIa	3-6	40	-10 to +50	Fixed
PLG6357AE-AX9	635	5-7	IIIb	3-4.5	60	-10 to +50	Adjustable
PLG6357FE-AX9	635	5-7	IIIb	3-4.5	60	-10 to +50	Fixed
PLG6501AE-BX9	650	0.5-0.99	II	3-6	25	-10 to +40	Adjustable
PLG6501FE-BX9	650	0.5-0.99	II	3-6	25	-10 to +40	Fixed
PLG6504AE-BX9	650	2.5-3.5	IIIa	3-6	30	-10 to +40	Adjustable
PLG6504FE-BX9	650	2.5-3.5	IIIa	3-6	30	-10 to +40	Fixed
PLG6501AE-AX9	650	0.5-0.99	II	3-6	25	-10 to +50	Adjustable
PLG6501FE-AX9	650	0.5-0.99	II	3-6	25	-10 to +50	Fixed
PLG6504AE-AX9	650	2.5-3.5	IIIa	3-6	30	-10 to +50	Adjustable
PLG6504FE-AX9	650	2.5-3.5	IIIa	3-6	30	-10 to +50	Fixed
PLG6701AE-X9	670	0.5-0.99	II	3-6	40	-10 to +50	Adjustable
PLG6701FE-X9	670	0.5-0.99	II	3-6	40	-10 to +50	Fixed
PLG6704AE-X9	670	2.5-3.5	IIIa	3-6	40	-10 to +50	Adjustable
PLG6704FE-X9	670	2.5-3.5	IIIa	3-6	40	-10 to +50	Fixed
PLG7804AE-X9	780	2.5-3.5	IIIb	3-6	30	-10 to +50	Adjustable
PLG7804FE-X9	780	2.5-3.5	IIIb	3-6	30	-10 to +50	Fixed
PLG8084AE-X9	808	2.5-3.5	IIIb	3-6	30	-10 to +40	Adjustable
PLG8084FE-X9	808	2.5-3.5	IIIb	3-6	30	-10 to +40	Fixed
PLG8504AE-X9	850	2.5-3.5	IIIb	3-6	30	-10 to +50	Adjustable
PLG8504FE-X9	850	2.5-3.5	IIIb	3-6	30	-10 to +50	Fixed
PLG9044AE-X9	904	2.5-3.5	IIIb	3-6	30	-10 to +50	Adjustable
PLG9044FE-X9	904	2.5-3.5	IIIb	3-6	30	-10 to +50	Fixed
PLG9047AE-X9	904	5-7	IIIb	3-6	40	-10 to +50	Adjustable
PLG9047FE-X9	904	5-7	IIIb	3-6	40	-10 to +50	Fixed
PLG9807AE-X9	980	5-7	IIIb	3-6	45	-10 to +40	Adjustable
PLG9807FE-X9	980	5-7	IIIb	3-6	45	-10 to +40	Fixed

Specifications of PLG-X9 Series Laser Diode Modules with Cross Hair Lens

Wavelength (nm)	635	650	670	780	808	850	904	980
Laser light	Visible Red				Infrared			
Laser class	Class II <1mW, Class IIIa <5mW, Class IIIb >5mW				Class IIIb			
Diode structure	Index guided							
Diode output power	5-10mW							
Operating current	25-50mA typical							
Operating voltage	3–6 VDC							
Drive circuit	Regulated APC (automatic power control)							
Optics	Glass collimating lens plus the cross-hair lens							
Beam divergence	~9-degree full fan angle							
Beam profile	~15.7cm cross hair at 1m distance							
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 housing: Dia. 10.5mm x L. 20.5mm + Cross hair: dia. 7mm x T. 1mm							
Weight	9.8gm typical							
Cross hair optics	~9-degree full fan angle cross hair optics attached on the aperture							

Additional Notes

- The PLG-X9 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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