



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

Elliptical Beam, Dia. 6mm, 3–6VDC



Overview

The Lasermate PMS series laser diode module is designed for OEM applications with low 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
- Good performance and low cost
- Miniature design: Dia. 6mm x L. 12.6mm; PCB size W. 7.5mm x L.11.7mm
- Adjustable or fixed focus
- Elliptical beam profile
- Singlet plastic collimating lens
- Automatic Power Control (APC) circuit

Applications

- Pointing
- Leveling
- Sensing

Product Overview

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

Part Number	Wavelength (nm)	Optical output power (mW)	Laser class	PCB size (mm)	Operating Current typ. (mA)	Operating Temperature (°C)	Focus
PMS6351AW-B	635	0.5-0.99	II	W 7.5xL 11.7	40	-10 to +40	Adjustable
PMS6351FW-B	635	0.5-0.99	II	W 7.5xL 11.7	40	-10 to +40	Fixed
PMS6353AW-B	635	2.1-3	IIIa	W 7.5xL 11.7	40	-10 to +40	Adjustable
PMS6353FW-B	635	2.1-3	IIIa	W 7.5xL 11.7	40	-10 to +40	Fixed
PMS6351AW-A	635	0.5-0.99	II	W 7.5xL 11.7	40	-10 to +50	Adjustable
PMS6351FW-A	635	0.5-0.99	II	W 7.5xL 11.7	40	-10 to +50	Fixed
PMS6353AW-A	635	2.1-3	IIIa	W 7.5xL 11.7	40	-10 to +50	Adjustable
PMS6353FW-A	635	2.1-3	IIIa	W 7.5xL 11.7	40	-10 to +50	Fixed
PMS6501AW-B	650	0.5-0.99	II	W 7.5xL 11.7	25	-10 to +40	Adjustable
PMS6501FW-B	650	0.5-0.99	II	W 7.5xL 11.7	25	-10 to +40	Fixed
PMS6503AW-B	650	2.1-3	IIIa	W 7.5xL 11.7	25	-10 to +40	Adjustable
PMS6503FW-B	650	2.1-3	IIIa	W 7.5xL 11.7	25	-10 to +40	Fixed
PMS6501AW-A	650	0.5-0.99	II	W 7.5xL 11.7	30	-10 to +50	Adjustable
PMS6501FW-A	650	0.5-0.99	II	W 7.5xL 11.7	30	-10 to +50	Fixed
PMS6503AW-A	650	2.1-3	IIIa	W 7.5xL 11.7	30	-10 to +50	Adjustable
PMS6503FW-A	650	2.1-3	IIIa	W 7.5xL 11.7	30	-10 to +50	Fixed
PMS7803AW	780	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +50	Adjustable
PMS7803FW	780	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +50	Fixed
PMS8083AW	808	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +40	Adjustable
PMS8083FW	808	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +40	Fixed
PMS8503AW	850	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +50	Adjustable
PMS8503FW	850	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +50	Fixed
PMS9043AW	904	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +50	Adjustable
PMS9043FW	904	2.1-3	IIIb	W 7.5xL 11.7	30	-10 to +50	Fixed
PMS9806AW	980	4.2-6	IIIb	W 7.5xL 11.7	45	-10 to +40	Adjustable
PMS9806FW	980	4.2-6	IIIb	W 7.5xL 11.7	45	-10 to +40	Fixed

Specifications of PMS Series Laser Diode Modules

Wavelength (nm)	635	650	780	808	850	904	980
Laser light	Visible Red			Infrared			
Laser class	Class II <1mW, Class IIIa <5mW			Class IIIb			
Diode structure	Index guided						
Diode output power	5-10mW						
Operating current	25-50mA typical						
Operating voltage	3–6 VDC						
Drive circuit	APC with voltage regulator W. 7.5 x L. 11.7mm						
Optics	Singlet plastic collimating lens						
Beam divergence	< 0.5 mrad						
Beam size @ 5 m	~4 x 7 mm						
Beam profile	Elliptic						
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. 6mm x L. 12.6mm; PCB: W. 7.5mm x L. 11.7mm						
Weight	10 gm typical						

Additional Notes

- The PMS 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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