



PSC Series – 650nm Class II Dot Laser Diode Modules

Circular Beam, Meets Single Fault Failure Requirements (IEC/EN 60825-1, JQA)



Overview

The Lasermate PSC series class II laser diode modules are designed with the driver PCB to meet Single Fault Failure Requirements for IEC 60825-1, EN 60825-1 and Japan Quality Assurance (JQA). International Electrotechnical Commission (IEC) 60825-1 is applicable to the safety of laser products emitting laser radiation in the wavelength range of 180nm to 1mm. IEC 60825-1, EN 60825-1, and JQA require the laser products to meet Single Fault Failure requirements, which require the highest emitted power under reasonably foreseeable single fault failure conditions never exceeding the laser classification. Therefore, for class II laser products, the output power is <math><1\text{mW}</math>; the highest emitted power under reasonably foreseeable single fault failure conditions will not be greater than 1mW. The driver PCB for diode laser is of importance; the PSC-series laser diode modules eliminate the risk of laser product to emit above the AEL (accessible emission limit) of the desired class and keep the laser in the safe range as required.

Features

- Class II laser diode module
- For IEC 60825-1, EN 60825-1 and JQA (Japan Quality Assurance) compliances
- Fixed or adjustable focus
- Circular beam shape
- Singlet plastic collimating lens

Product Overview

Part Number	Wavelength (nm)	Optical output power (mW)	Laser class	Operating current typical (mA)	Operating voltage typical (V)	Operating temperature (°C)	Focus
PSC6501AQR	650	<math><1</math>	II	25	4-6	-10 to 50	Adjustable
PSC6501FQR	650	<math><1</math>	II	25	4-6	-10 to 50	Fixed

Specifications of PSC Series Laser Diode Modules

Wavelength (nm)	650 +/-10
Laser light	Visible Red
Laser class	Class II <1mW
Diode structure	Index guided
Optical output power	0.5-0.99mW
Operating current	25 mA typical
Operating voltage	4-6 VDC
Drive circuit	APC (automatic power control) circuit that meets Single Fault Failure Requirements for IEC 60825-1, EN 60825-1, and JQA compliances
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 +50 °C
Connector	Black wire -, red wire + & brass case +
Dimensions	Brass case: Dia. 8mm x L. 18mm + PCB: L.10mm x W. 11mm

Additional Notes

- The PSC 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.
- Specifications are subject to change without notice.



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