



## **635nm-980nm Cross Hair Generating Laser Diode Modules**

With LED Indicator as Safety Feature and Super Fine Pitch for Precision Focusing

### **LTG-X9 Series**



### **Overview**

The Lasermate high performance LTG-X9 series laser diode modules with cross hair profile are self-contained laser diode modules designed for OEM applications with fine cross hair profile, adjustable output power and beam focusing requirements. The laser is designed as a high quality and high-performance laser diode module for industrial heavy-duty users. Designed for OEM, the laser is ideal for a wide range of low power laser applications, especially in continuous long-time usage, such as alignment and positioning.

### **Features**

- Wide range of wavelengths from 635nm to 980nm (including 650nm, 670nm, 780nm, 808nm, 850nm, 904nm)
- Wide range of output power up to 50mW
- High performance and low cost
- Adjustable optical output power and Automatic Power Control (APC)
- Adjustable focus
- Super fine pitch (0.25mm) for precision focusing
- Standard English dimension (Dia. 0.5 in x L. 2.0 in)
- Green LED safety indicator
- Beam profile: “+” cross hair
- Beam thickness: <1mm @ 1m distance
- Beam length: ~15.7cm @ 1m distance
- Full fan angle: ~9 degrees

**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 LTG-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)
LTG6351AH-X9	635	0.5-0.99	II	4.5-9	40	-10 to +50
LTG6354AH-X9	635	2.5-3.5	IIIa	4.5-9	40	-10 to +50
LTG6357AH-X9	635	5-7	IIIb	4.5-6	60	-10 to +50
LTG63512AH-X9	635	10-12	IIIb	4.5-6	90	-10 to +40
LTG6501AH-X9	650	0.5-0.99	II	4.5-9	30	-10 to +50
LTG6504AH-X9	650	2.5-3.5	IIIa	4.5-9	30	-10 to +50
LTG6507AH-X9	650	5-7	IIIb	4.5-9	45	-10 to +40
LTG65012AH-X9	650	10-12	IIIb	4.5-6	80	-10 to +40
LTG66025AH-X9	660	22-25	IIIb	4.5-6	115	-10 to +60
LTG6701AH-X9	670	0.5-0.99	II	4.5-9	35	-10 to +50
LTG6704AH-X9	670	2.5-3.5	IIIa	4.5-9	35	-10 to +50
LTG7804AH-X9	780	2.5-3.5	IIIb	4.5-9	35	-10 to +50
LTG78025AH-X9	780	22-25	IIIb	4.5-6	90	-10 to +60
LTG78045AH-X9	780	40-45	IIIb	4.5-6	115	-10 to +50
LTG8084AH-X9	808	2.5-3.5	IIIb	4.5-9	35	-10 to +50
LTG80825AH-X9	808	22-25	IIIb	4.5-6	95	-10 to +50
LTG80845AH-X9	808	40-45	IIIb	4.5-6	125	-10 to +50
LTG8504AH-X9	850	2.5-3.5	IIIb	4.5-9	35	-10 to +50
LTG8507AH-X9	850	5-7	IIIb	4.5-9	45	-10 to +50
LTG9044AH-X9	904	2.5-3.5	IIIb	4.5-9	35	-10 to +50
LTG9047AH-X9	904	5-7	IIIb	4.5-9	45	-10 to +50
LTG9807AH-X9	980	5-7	IIIb	4.5-9	45	-10 to +50
LTG98012AH-X9	980	10-12	IIIb	4.5-6	80	-10 to +50
LTG98025AH-X9	980	22-25	IIIb	4.5-6	100	-10 to +50

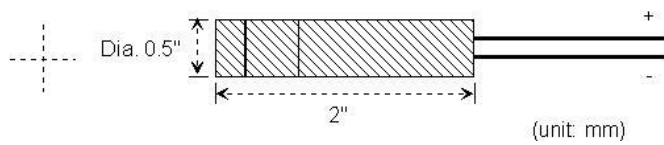
\*Optical output power before adding crosshair lens.

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

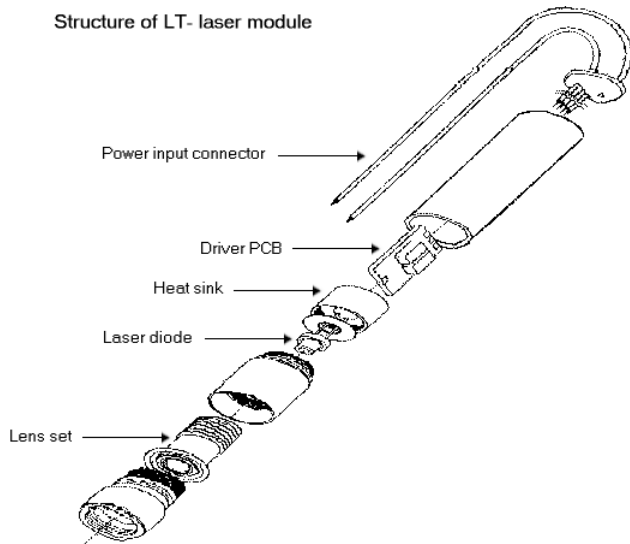
Wavelength (nm)	635	650	670	780	808	850	904	980
Laser light	Visible Red				Infrared			
Laser class	Class II <1mW, Class IIIa <5mW, Class IIIb >5mW				Class IIIb			
Diode structure	Index guided							
Diode output power	5-50mW							
Operating current	30-90mA typical							
Operating voltage	4.5–6 VDC or 4.5-9V DC							
Drive circuit	Regulated APC with soft-start protection							
Optics	Singlet glass collimating lens with AR coating and cross hair optics							
Beam divergence of cross hair lens	~9 degree							
Beam length @ 1 m	~15.7 cm							
Beam profile	Cross hair (dash lines)							
Focus	Adjustable							
Operating temperature	-10 to +40°C, -10 to +50°C, or -10 to +60°C							
Connector	Black wire - & red wire +							
Safety feature	Green LED indicator							
Dimensions	Dia. 0.5" x L. 2"							
Weight	~35 gm							

**Outline Dimensions of LTG-X9 Series Cross Hair Laser Diode Modules (unit: mm)**

LTG laser module with cross hair profile:



Structure of LT- laser module



**Additional Notes**

- The LTG-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.



**Lasermate Group, Inc.**  
19608 Camino De Rosa  
Walnut, CA 91789 USA  
Tel: (909)718-0999  
Fax: (909)718-0998  
[sales@lasermate.com](mailto:sales@lasermate.com)  
[www.lasermate.com](http://www.lasermate.com)