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Data Sheet
Rev.01

LTC Series – High Performance Laser Diode Modules (635nm–980nm)

Circular Beam, Focus Adjustable, Diameter 0.5 inch

Overview

The LTC series from Lasermate offers high performance laser diode modules with wavelengths ranging from 635nm to 980nm. These compact modules feature adjustable optical output power and a focusable circular beam, making them ideal for precise applications. Designed specifically for OEM use, they provide reliable long-term operation in industrial environments. Typical uses include barcode scanning, measurement, alignment, and positioning tasks where stable and adjustable laser output is critical.

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
- Adjustable focus
- Super fine pitch (0.25mm) for precision focusing
- LED indicator
- Circular beam profile
- Singlet plastic collimating lens

Applications

- Pointing
- Leveling
- Sensing

Product Overview

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

Part Number	Wavelength (nm)	Optical output power (mW)	Laser class	Operating Voltage (V DC)	Operating Current (mA)	Operating Temperature (°C)
LTC6351AH	635	0.5-0.99	II	4.5-9	40	-10 to +50
LTC6352AH	635	1.2-2	IIIa	4.5-9	40	-10 to +50
LTC6354AH	635	2.4-4	IIIa	4.5-9	60	-10 to +50
LTC6358AH	635	5-8	IIIb	4.5-6	90	-10 to +40
LTC6501AH	650	0.5-0.99	II	4.5-9	30	-10 to +50
LTC6502AH	650	1.2-2	IIIa	4.5-9	30	-10 to +50
LTC6504AH	650	2.4-4	IIIa	4.5-9	45	-10 to +50
LTC6608AH	660	5-8	IIIb	4.5-6	80	-10 to +50
LTC66014AH	660	10-14	IIIb	4.5-6	115	-10 to +50
LTC6701AH	670	0.5-0.99	II	4.5-9	35	-10 to +50
LTC6702AH	670	1.2-2	IIIa	4.5-9	35	-10 to +50
LTC7802AH	780	1.2-2	IIIb	4.5-9	35	-10 to +50
LTC78014AH	780	10-14	IIIb	4.5-6	90	-10 to +50
LTC78025AH	780	22-25	IIIb	4.5-6	115	-10 to +50
LTC8082AH	808	1.2-2	IIIb	4.5-9	35	-10 to +40
LTC8502AH	850	1.2-2	IIIb	4.5-9	35	-10 to +50
LTC8504AH	850	2.4-4	IIIb	4.5-9	45	-10 to +50
LTC85014AH	850	10-14	IIIb	4.5-6	75	-10 to +50
LTC9042AH	904	1.2-2	IIIb	4.5-9	35	-10 to +50
LTC9044AH	904	2.4-4	IIIb	4.5-9	45	-10 to +50
LTC9804AH	980	2.4-4	IIIb	4.5-9	45	-10 to +40
LTC9808AH	980	5-8	IIIb	4.5-6	70	-10 to +40
LTC98014AH	980	10-14	IIIb	4.5-6	80	-10 to +40

Specifications of LTC 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 >5mW			Class IIIb				
Diode structure	Index guided							
Diode output power	5-100mW							
Operating current	30-125mA typical							
Operating voltage	4.5–6 VDC or 4.5–9 VDC							
Drive circuit	Regulated APC with LED indicator							
Optics	Singlet plastic collimating lens							
Beam divergence	< 0.5 mrad							
Beam size @ 5 m	Dia. ~5 mm							
Beam profile	Circular							
Focus	Adjustable							
Operating temperature	-10 to +40 °C or +50 °C							
Connector	Black wire - & red wire +							
Safety feature	Green LED indicator							
Dimensions	Dia. 0.5” x L. 2”							
Weight	25.5 gm							
Option	Connecting to cross hair optics							

Additional Notes

- The LTC 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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