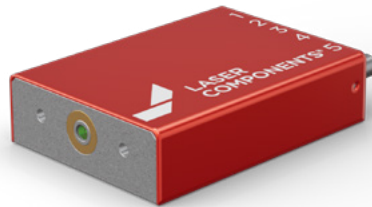


LS-SERIES

Pulsed Laser Diode Module



The LS-series of pulsed laser diode modules offer all of the features needed to safely drive pulsed lasers of different powers, in a compact housing. The modules are easy to handle and require only a +12 VDC supply and a trigger signal. External devices, such as trigger interfaces, are not necessary. These modules make the operation of pulsed lasers as straightforward as their cw counterparts.

For most applications it is only necessary to drive the laser with constant power and pulse length. However the following additional options are also offered:

- / adjustable pulse power (via control voltage)
- / adjustable pulse length (via control voltage)

These options offer the user greater flexibility and allow parameters to be changed while the laser is operating. Such flexibility can mean real cost savings in product development.

A range of housing types is offered, including closed metal housings and low-cost versions. The metal versions are fully nickel-plated, in order to reduce EMI emissions from the module, and to protect the module from any external EMI.

Custom designed modules are available on request.

FEATURES

- / Wavelength: 850 nm / 905 nm / 1550 nm
- / Optical peak power: 1 W – 220 W
- / Short rise and fall times
- / Compact housing
- / Complete unit – no additional equipment needed
- / Adjustable pulse power (optional)
- / Adjustable pulse length (optional)
- / Straightforward interfacing (standard drive voltages, TTL and CMOS trigger)
- / Excellent temperature stability

APPLICATIONS

- / Rangefinding
- / Surveying equipment
- / Weapons simulation
- / Laser radar / LiDAR
- / Security barrier
- / Ceilometer
- / Medical
- / Illumination
- / Optical trigger

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PULSED LASER DIODE MODULE

LS-Series



SPECIFICATIONS

850 nm PLD-Modules

Part Number	LS8-10-150-S10-00	LS8-1/10-30/150-S10-11
Wavelength [nm]	850	
Optical peak power (NA >0.5) [W] *	10	1 - 10
Pulse length [ns]	150	30 - 150
Pulse energy [nJ]	1500	30 - 1000
Max. average power [mW]	10	
Trigger input	TTL ↑	
Max. PRF @ max. P [kHz]	5	
Integrated PLD	850D1S09S	
Emitting area [μm x μm]	225 x 1	
Package	S 10	
Operating voltage	+12	

905 nm PLD-Modules

Part Number	LS9-25-4-S10-00	LS9-220-8-S10-00	LS9-40/220-30/100-S10-11
Wavelength [nm]	905		
Optical peak power (NA >0.5) [W] *	25	220	40 – 220
Pulse length [ns]	4.0	8.0	30 – 100
Pulse energy [nJ]	100	1760	1200 – 22000
Max. average power [mW]	3	33	110
Trigger input	TTL ↑		
Max. PRF @ max. P [kHz]	25		5
Integrated PLD	905D1S3J03S	905D3S3J09S	
Emitting area [μm×μm]	85×10	235×400	
Package	S 10		
Operating voltage	+12		

1550 nm PLD-Modules

Part Number	LS5-5-4-S10-00	LS5-40-8-S10-00	LS5-10/40-30/150-S10-11
Wavelength [nm]	1550		
Optical peak power (NA >0.5) [W] *	5	40	10 – 40
Pulse length [ns]	4.0	8.0	30 – 150
Pulse energy [nJ]	20	400	300 – 6000
Max. average power [mW]	0.7	4.5	22
Trigger input	TTL ↑		
Max. PRF @ max. P [kHz]	32	7	3
Integrated PLD	155G1S06S	155G4S14S	
Emitting area [μm x μm]	150 x 1	350 x 340	
Package	S 10		
Operating voltage	+12		

* Note: Power variation in the tolerance of +0 % / -10 %

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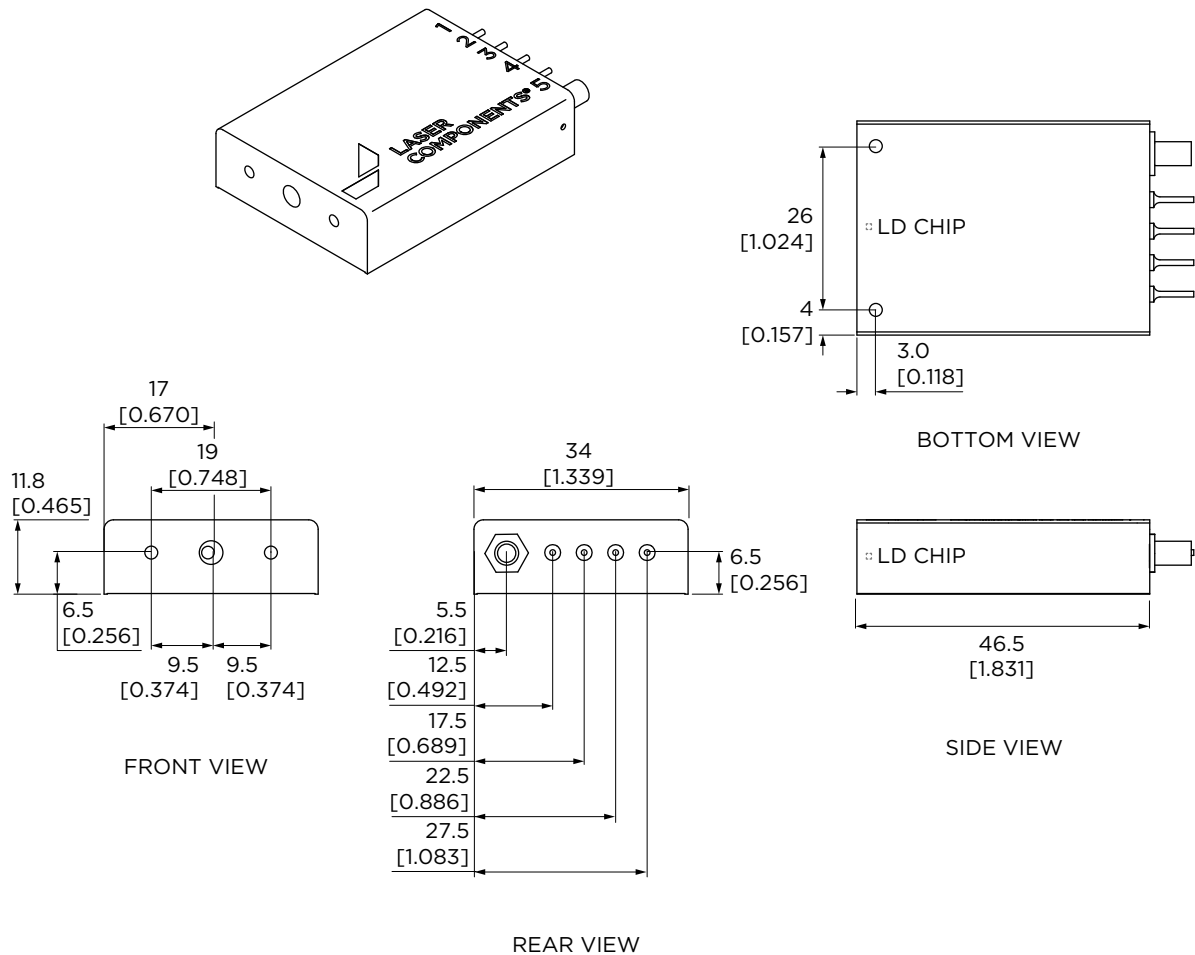
PULSED LASER DIODE MODULE

LS-Series



TECHNICAL DRAWING

S10-package



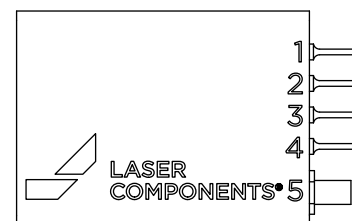
S10-Package

Pin out:

	fixed	adjustable
1.	$V_{op} = 12\text{ V}$	$V_{op} = 12\text{ V}$
2.	GND	VC_TW
3.	N.C.	VC_P
4.	N.C.	GND
5.	TRG	TRG

Units: mm [inch]

Dimensions are in millimeters - [inches] and are for reference only.



PULSED LASER DIODE MODULE

LS-Series



ORDERING CODE

	Wavelength	Optical Peak Power [W]	Pulse Length [ns]	Package Style*	Options
LS	X 8 (850 nm) 9 (905 nm) 5 (1550 nm)	X	X	S10	X1 (Variable Pulse Power) 1x (Variable Pulse Length)

Foot Note / Abbreviations

S10 = Closed metal, standard, l = 46.5 mm, w = 34 mm, h = 11.8 mm

* Other packages are available on request

Example: FP-MV/pulseHP-ST-660-500-60-STD

PRODUCT CHANGES AND LIABILITY

LASER COMPONENTS reserves the right to make changes to the product specifications and/or discontinue products without prior notice. While every effort has been made to ensure the accuracy and reliability of the information provided in this datasheet, LASER COMPONENTS accepts no liability for any errors, omissions, or the consequences of product use. It is the responsibility of the customer to ensure that the product is suitable for their specific application and to comply with all applicable laws and regulations.

ORDERING INFORMATION

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website at www.lasercomponents.com

Custom designed products are available on request.

SAFETY AND HANDLING INFORMATION

Personal Hazard

Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 »Safety of laser products«.

Handling Precautions

Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload.



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