

LDMP- SERIES HIGH POWER PULSED LASER DIODES



LDMP- series of pulsed laser diodes are MQW structure devices with InGaAsP active layers fabricated using advanced MOCVD epitaxial growth techniques. Devices are designed with pulse width FWHM of 50~100ns and repetition frequency up to 15 KHz. Standard TO9mm package with wavelengths of 905 and 1550 nm, different emitter sizes and stack layers are available for various applications such as range finder and optical measurement.

LDMP-0905

Feature:

- High peak output Power: >50W
- InGaAsP/InGaAsP MQW Structure by MOCVD

Maximum Rating:

Peak Reverse Voltage: V_{rm} 2V

Case Temperature:

Operating -55°C to +65°C

Storage -55°C to +85°C

Soldering 5 seconds, +200°C

Specifications (25°C)

	Symbol	LDMP9050030	LDMP9050050	LDMP9050070	LDMP9050005	Units
Center Wavelength	λ_o	905	905	905	905	nm
Wavelength Tolerance		± 10	± 10	± 10	± 10	
Peak Forward Current	I_f	50	50	50	5	A
Peak Output Power	P_o	30	50	70	3	W
Pulse Width Max.	T_w	50~100	50~100	50~100	50~100	ns
Duty Factor	DF	0.05	0.05	0.05	0.05	%
Peak Forward Voltage	V_f	45	48	52	15	V
Beam Divergence FWHM	$\theta//\times\theta\perp$	10x40	10x40	10x40	10x40	Degree
Source Size	WxH	370x1	370x100	370x200	40x1	μm
Number of Laser Diode		1	2	3	1	pcs.
Element						
Package		TO Φ 9mm	TO Φ 9mm	TO Φ 9mm	TO Φ 5.6mm	

LDMP-1550

Feature:

- High peak output Power: 10W, 20W, 30W
- Eye safe wavelength - 1550nm
- High reliability
- High efficiency

Applications:

- Eye safe range determination
- Optical beacons

Maximum Rating:

Peak Reverse Voltage V_{rm} 2V

Case Temperature:

Operating -55°C to $+65^{\circ}\text{C}$

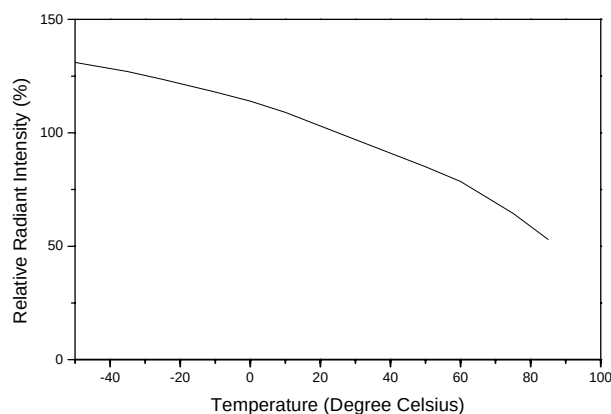
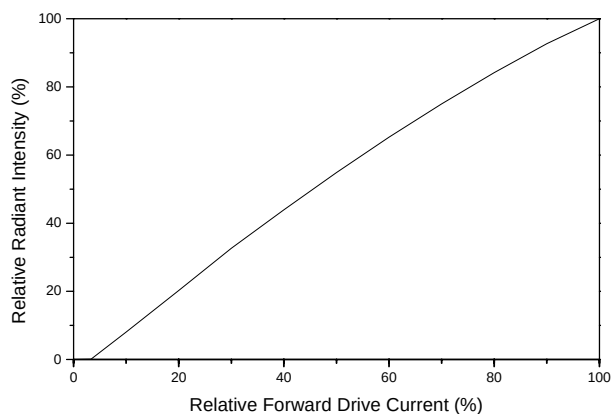
Storage -55°C to $+85^{\circ}\text{C}$

Soldering 5 seconds, $+200^{\circ}\text{C}$

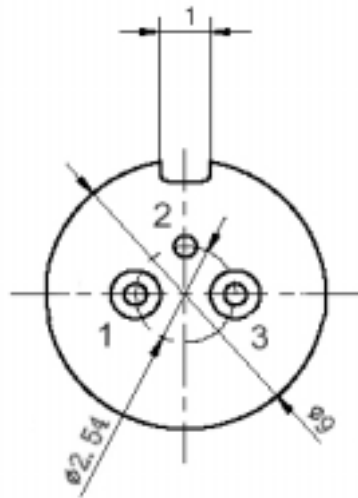
Specifications ($T_c=25^{\circ}\text{C}$)

	Symbol	LDMP15500010	LDMP15500020	LDMP15500030	Units
Center Wavelength	λ_o	1550	1550	1550	nm
Center Wavelength Tolerance		± 30	± 30	± 30	
Peak Output Power	P_o	10	20	30	W
Peak Forward Current	I_f	50	55	75	A
Pulse Width Max.	T_w	200	100	75	ns
Duty Factor Max.	DF	0.05	0.01	0.0075	%
Threshold Current	I_{th}	2.5	2.5	2.5	A
Peak Forward Voltage Typ.	V_f	25	30	40	V
Beam Divergence FWHM	$\theta//\times\theta_{\perp}$	20x40	20x40	20x40	Degree
Emitter Area	$W\times H$	370x1	370x100	370x200	μm
Number of Laser Diode Element / Assembly		1	2	3	pcs.
Package		TO $\Phi 9\text{mm}$	TO $\Phi 9\text{mm}$	TO $\Phi 9\text{mm}$	

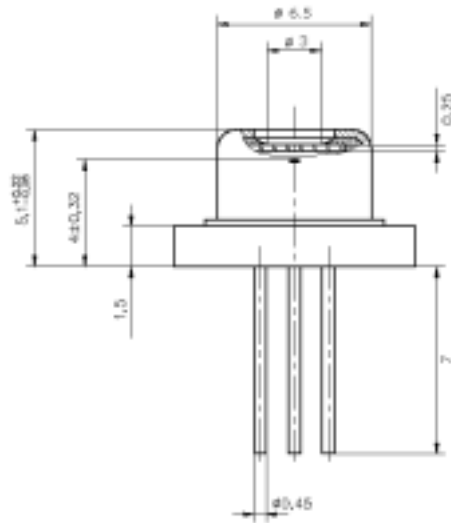
Typical Performance



TO Φ 9mm Package



1 is LD cathode; 2 is LD anode



Ordering Information

LDMP———

Emitter Area (WxH) (μ m):

- 0: 40 x 1
- 1: 370 x 1
- 2: 370 x 100
- 3: 370 x 200

Package Style :

- 0 : Small heat sink
- 1 : Medium heat sink
- 2 : Large heat sink
- 3 : TO—3 package
- 4 : TO—14 package
- 5 : TO—5.6 package with 3 pins
- 6 : TO—5.6 package with 4 pins
- 9 : TO—9 package

Rated Output Power (W)

Center Wavelength: 0905—905nm

1550—1550nm

Multi Mode Pulsed Laser Diode