

905nm 75W 100ns Pulsed Laser Diode



- **Product Description**

This 4-channel array surface-mount pulsed laser diode (PLD) is an ideal choice for high-reliability LiDAR applications. The LD is mounted in a highly reliable hollow ceramic package, which facilitates short-pulse operation and high peak power output. In the 3-stack structure, the anodes are independent electrodes, and the cathode is a common electrode, allowing both simultaneous and individual operation of the PLDs.



- **Product features**

High peak power; High-speed response; High repetition frequency; Compact

TO package; Low drive voltage

- **Part Number**

MP-PLD-NS-100-905-75W

- **Application area**

Laser ranging | Fiber-optic sensing | Medical aesthetics | Industrial marking |

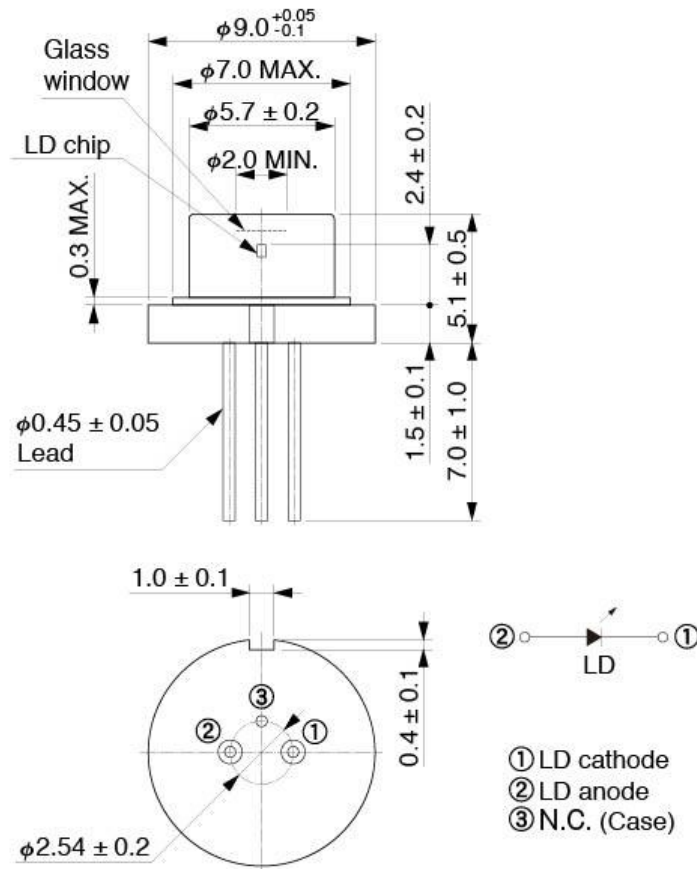
Quantum communication

- **Core parameters**

Working wavelength	Output power
905nm	75W



● Dimension Drawing



Directions of far field patterns (FFP), parallel and vertical direction against at can package. (Front of view)

	$\phi 5.6 \text{ PKG}$	$\phi 9.0 \text{ PKG}$
$\theta_{//}$ Parallel		
θ_{\perp} Vertical		

● General Parameters

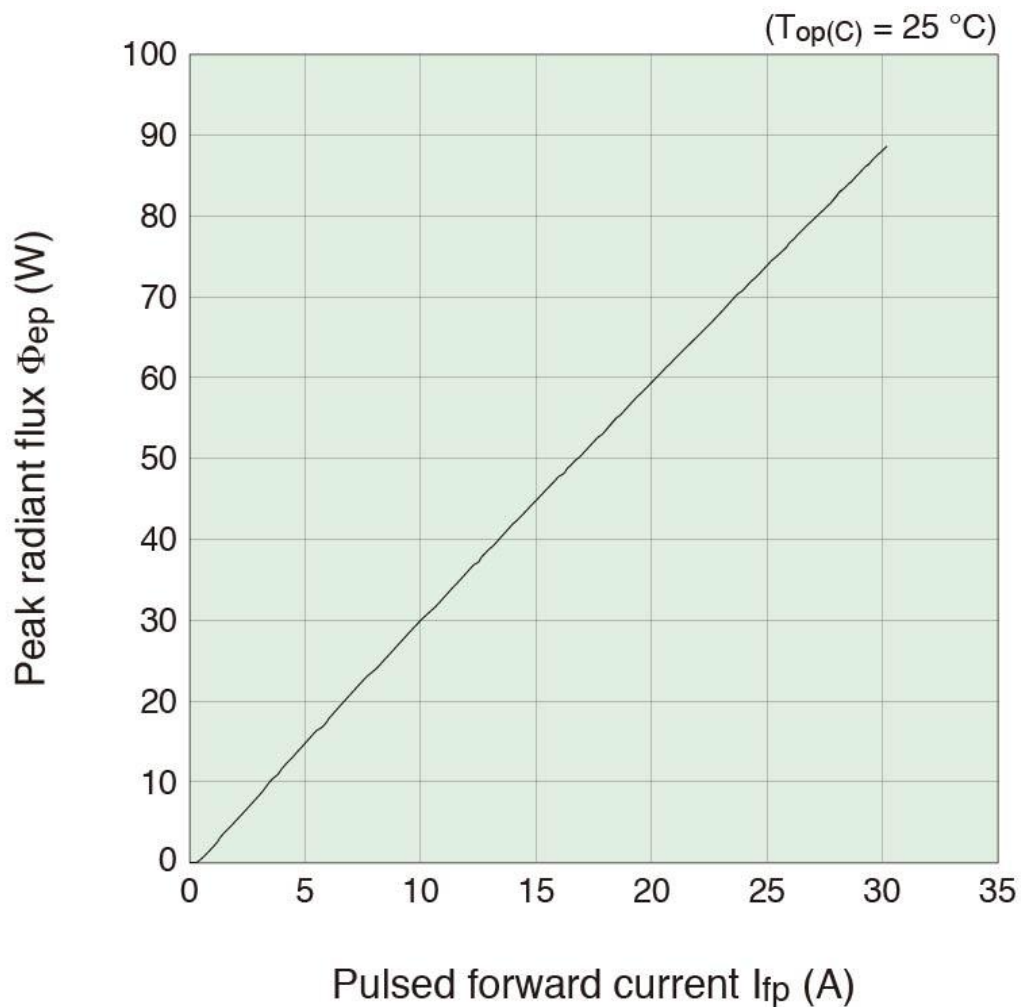
Technical parameters

Model	Value
Type	3 Stack PLDs
Pulse forward current	30 A
Pulse duration	100 ns
Duty Cycle	0.1 %
Operating temperature	- 40 to + 85 °C
Storage temperature	- 40 to + 100 °C
Peak luminous wavelength Min. value	895 nm
Peak emission wavelength typical	905 nm
Peak luminescence wavelength Max. value	915 nm
Light pulses output typical values	75 W
Spectral radiation half-bandwidth typical	4 nm
Typical values for operating voltages	13 V
Rising time Max. value	2 ns
Luminous width	230 × 10 μm
Beam Divergence Angle_Parallel Min. value	6 °
Beam divergence angle_parallel typical value	10 °
Beam divergence angle_parallel Max. value	14 °
Beam Divergence Angle_Vertical Min. value	20 °
Beam divergence angle_vertical typical value	24 °

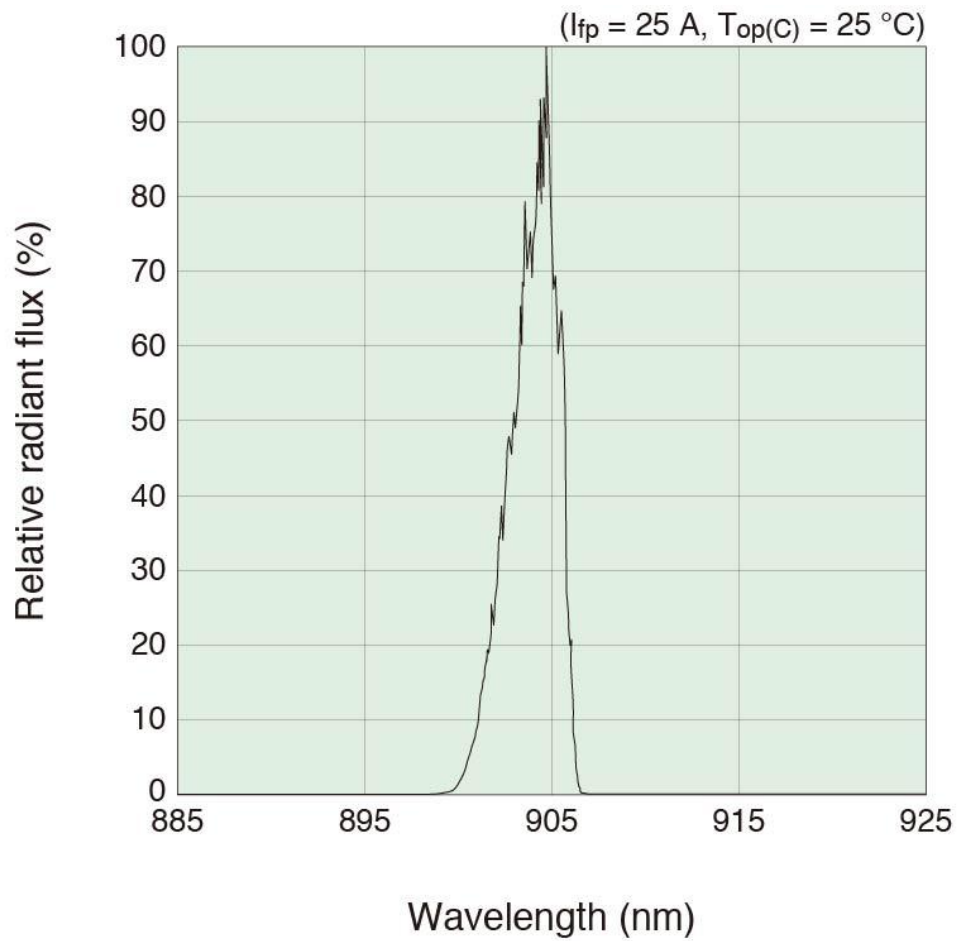
Beam Divergence Angle_Vertical Max. value	28 °
Typical value of laser pumping threshold current	0.5 A
Encapsulation	dia. 5.6CD

Product characteristics:

Radiated output power and operating current (typical)



Typical emission spectrum



General parameters

Model	Name	Type	Pulse forward current	Peak emission wavelength typical	Light pulses output typical values	Luminous width	Encapsulation
MP-PLD-NS-1	Pulsed	3 Stack	25 A	905 nm	70 W	230 ×	Ceram



00-905-70W	laser diodes	PLDs				10 μm	ic
MP-PLD-NS-1 00-870-21W	Pulsed laser diodes	3 Stack PLDs	10 A	870 nm	21 W	70 × 10 μm	dia. 5.6CD
MP-PLD-NS-1 00-870-20W	Pulsed laser diodes	Single Emitter PLDs	25 A	870 nm	20 W	230 × 1 μm	dia. 9.0CD
MP-PLD-NS-1 00-905-21W	Pulsed laser diodes	3 Stack PLDs	10 A	905 nm	21 W	70 × 10 μm	dia. 5.6CD
MP-PLD-NS-1 00-905-75W	Pulsed laser diodes	3 Stack PLDs	30 A	905 nm	75 W	230 × 10 μm	dia. 5.6CD
MP-PLD-NS-1 00-905-100W	Pulsed laser diodes	3 Stack PLDs	40 A	905 nm	100 W	360 × 10 μm	dia. 5.6CD