905nm 100W 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 laser diode 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-100-905-100W

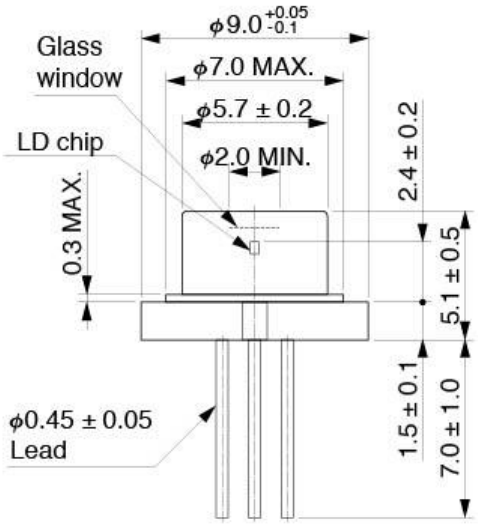
Application area

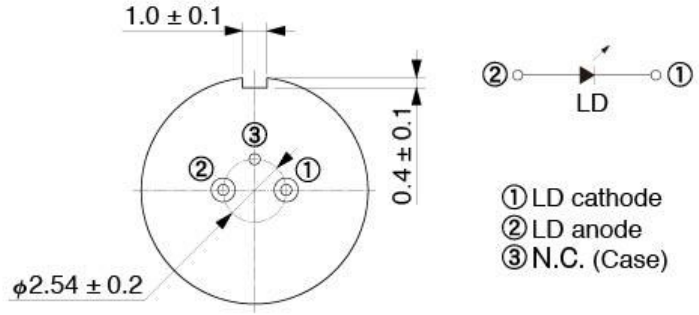
Laser ranging | Fiber-optic sensing | Medical aesthetics | Industrial marking | Quantum communication

Core parameters

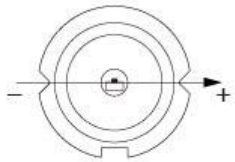
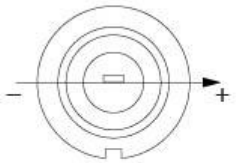
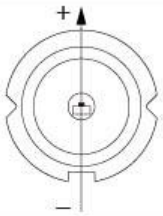
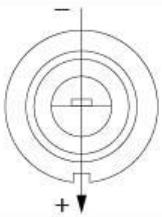
Working wavelength	Output power
905nm	100W

Dimension Drawing





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

	φ5.6 PKG	φ9.0 PKG
θ// Parallel		
θ⊥ Vertical		

General Parameters

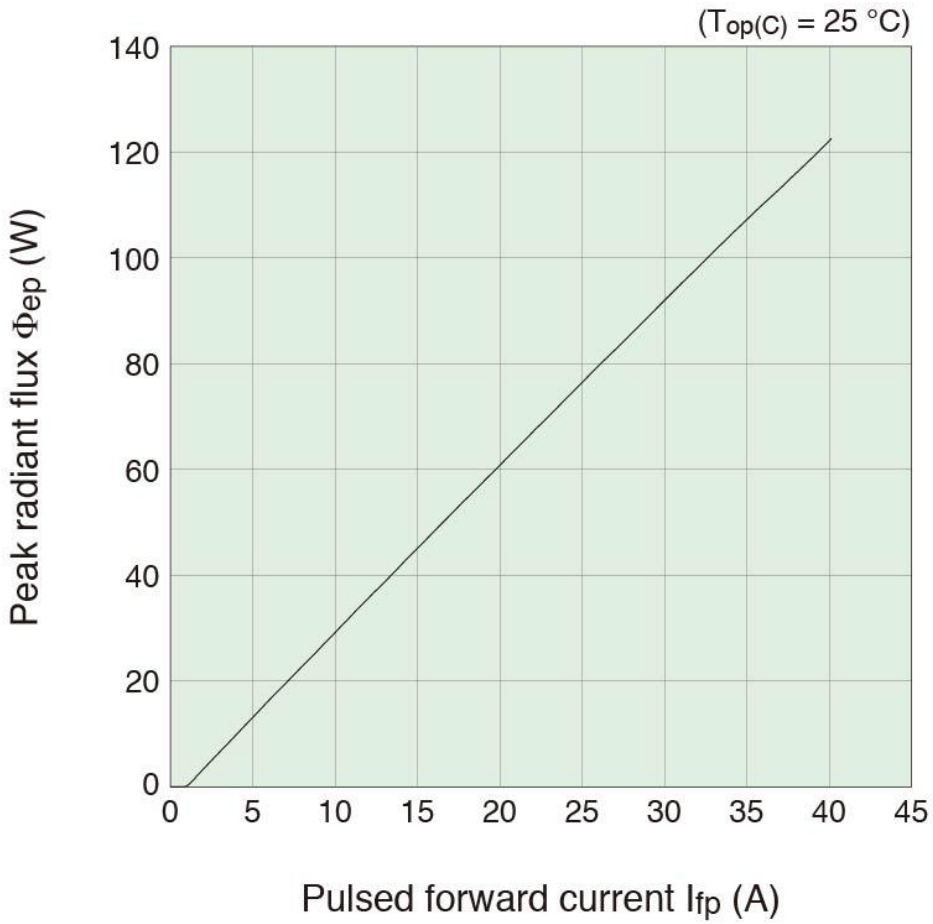
Technical parameters

Model	Value
Type	3 Stack PLDs
Pulse forward current	40 A
Pulse duration	100 ns
Duty Cycle	0.1 %
Operating temperature	- 40 to + 85 ℃
Storage temperature	- 40 to + 100 ℃
Peak luminous wavelengthMin. value	895 nm
Peak emission wavelength typical	905 nm
Peak luminescence wavelength Max. value	915 nm
Light pulses output typical values	100 W
Spectral radiation half-bandwidth typical	6 nm
Typical values for operating voltages	12 V
Rising timeMax. value	2 ns
Luminous width	360 × 10 μm
Beam Divergence Angle_Parallel Min. value	4 °
Beam divergence angle_parallel typical value	8 °
Beam divergence angle_parallel Max. value	12 °
Beam Divergence Angle_Vertical Min. value	19 °

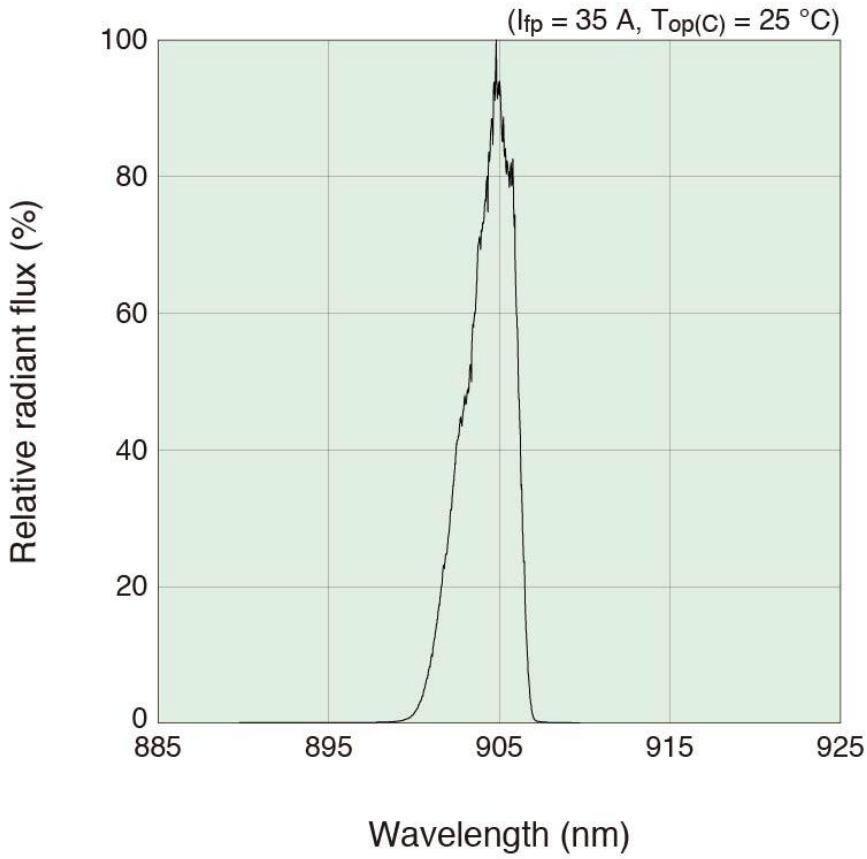
Beam divergence angle_vertical typical value	24 °
Beam Divergence Angle_Vertical Max. value	29 °
Typical value of laser pumping threshold current	0.8 A
Encapsulation	dia. 5.6CD

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-100-905-70W	Pulsed laser	3 Stack	25 A	905 nm	70 W	230 × 10 µm	Ceramic

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