Phone: +1 408-520-9825
sales@4in1photonics.com

905nm Pulsed Laser Diode

905nm/150W

GENERAL DESCRIPTION

The LDP905 series pulsed laser diodes feature stripe widths of 30µm to 220µm and can be stacked three or four emitters to realize the output power 15W to 150W. The high optical output and high density emission performance translate to superior beam performance which contributes to higher accuracy and expands longer distances in various LiDAR applications. LDP-905150-4S-18 is a 150W infrared high peak power laser diode with 220x18µm emitting area. The industry TO18 hermetic package ensures high reliability and temperature stability.

FEATURES

- Suited for short laser pulses from 1 to 100 ns
- 4 epi-stacked emitters structure for high density emission
- Robust TO-can package for high volume applications
- RoHS compliant

SERVICE

Optionally, we offer the complete value chain:

We design and develop laser products which are optimized to meet the specific requirements of your application.
In order to evaluate the performance of the lasers in the design phase we offer the rapid manufacture of prototypes and small series production.

APPLICATIONS

- Robot vacuum cleaner
- Automatic guided vehicles (AGVs)
- Other security devices

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Specifications

Optical & Electrical

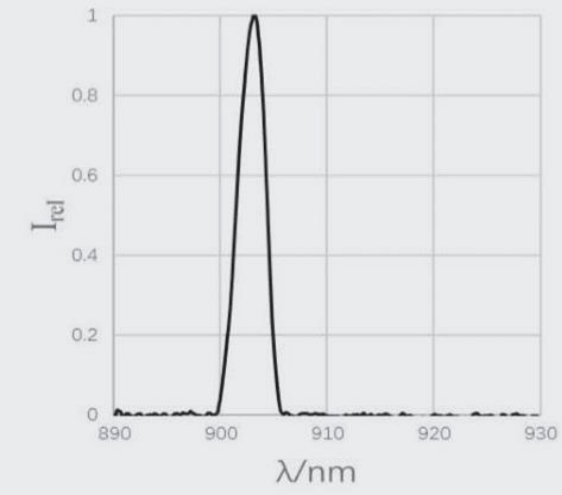
I_f=50A; t_p=100ns; D=0.1%; T_s=25°C

Parameter	Symbol	Minimum	Typical	Maximum
Peak Output power	P_o	140W	150W	160W
Peak wavelength	λ_p	895nm	905nm	915nm
Spectral width (FWHM)	$d\lambda$	-	7nm	-
Beam divergence (FWHM)	$\theta_{\parallel} \times \theta_{\perp}$	-	10°x22°	-
Emitting Area	WxH	-	220μm x 18μm	-
Threshold current	I_{th}	-	0.9A	-
Operating current	I_{op}	-	-	50A

Absolute Maximum

Parameter	Symbol	Minimum	Maximum	Test Conditions
Reverse voltage	V_r	-	2V	-
Pulse width (FWHM)	t_p	-	100ns	-
Duty cycle	D_c	-	0.1%	-
Operating case temperature	T_{op}	-40°C	105°C	-
Storage temperature range	T_{stg}	-40°C	105°C	-
Lead soldering time	T_{sol}	-	3sec.	260°C

Wavelength spectrum



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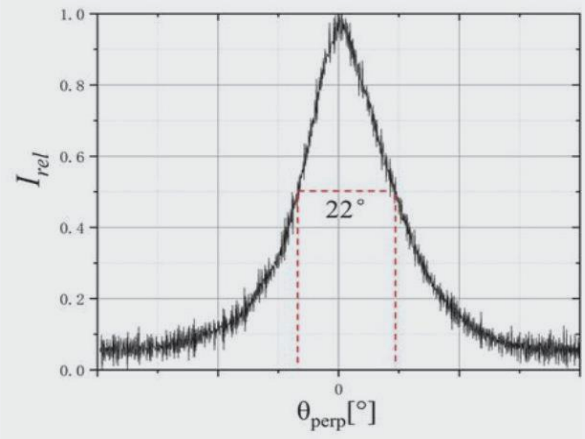
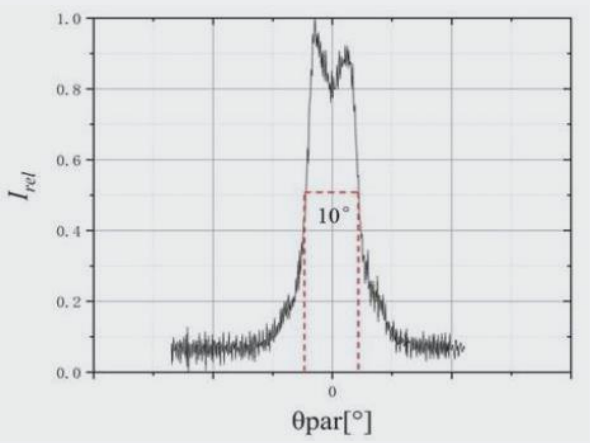
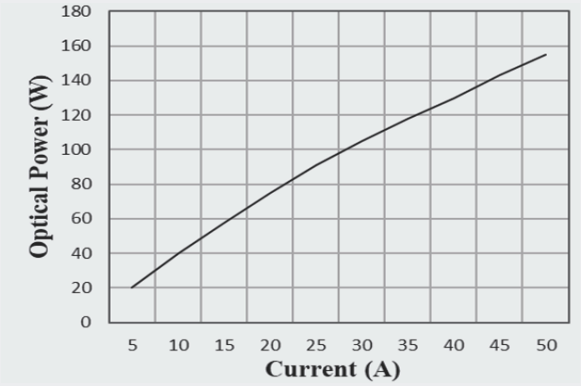
Fast axis far-field patten



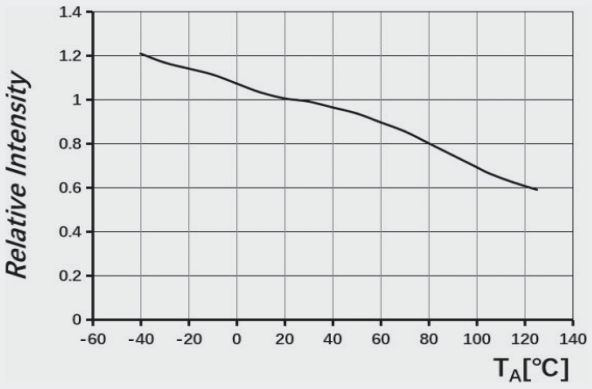
Slow axis far-field patten



Optical power vs current

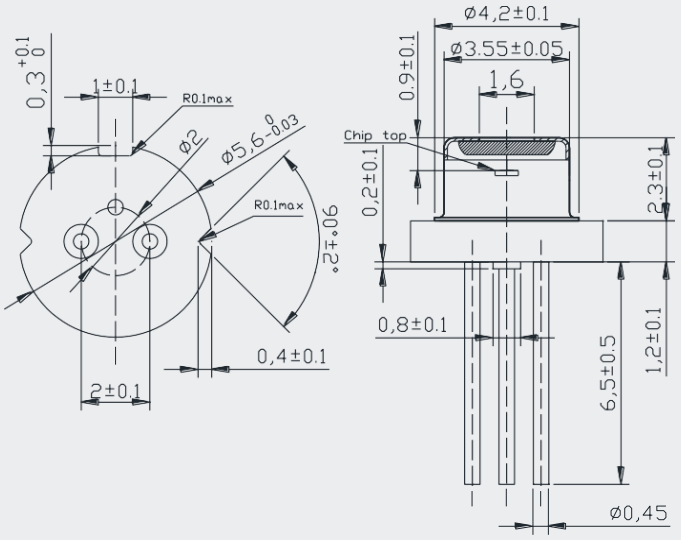


Optical power vs Temperature



Dimensions

Unit: mm



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