

905nm 75W pulse laser diode

Version: 3.1 17-05-25

Model: LSPLD905-75W
Features:

- Low cost plastic package
- Reliable strained InGaAs/GaAs material
- High power large-optical-cavity (LOC) structure for a narrow far-field
- Nanostack laser technology including multiple epitaxially stacked emitters
- Laser aperture 200um×10um


Applications:

- Laser range finder, laser ladar ,Security, surveillance
- Automobile collision avoidance system
- Illumination, ignition
- Industrial automatic control
- Science analysis and experiment
- Test and Measurement Equipment

Absolute maximum ratings:

parameter	symbol	value	unit
Operating temperature	Top	-40~+85	°C
Storage temperature	Tstg	-40~+100	°C
Light output	Po(pulse)	85	W
Pulse width (FWHM)	Tp	100	ns
Peak forward current	IF	40	A
Duty cycle	d.c.	0.1	%
Reverse voltage	V _r	3	V
Soldering temperature/time		260/10	°C/S

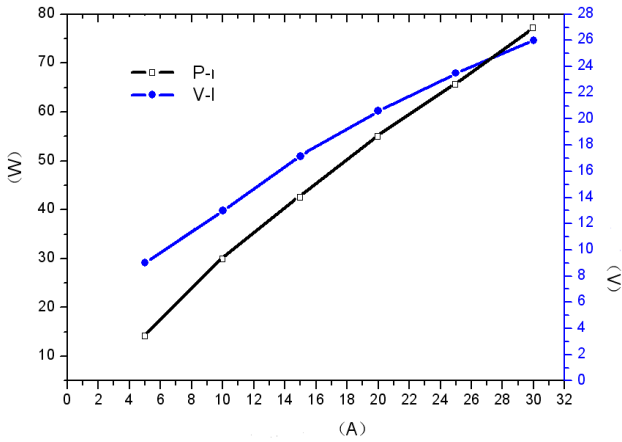
Electrical and optical characteristics:(T=25°C)

parameter	symbol	Min.	Typ,	Max.	unit
Center wavelength	λ	895	905	915	nm
Peak output power	Pop		75	85	W
Threshold Current	I _{th} (pulse)	0.5	0.8	1.0	A
Operating Voltage	V _{op}		25	26	V
Rise and time(10% - 90%)	t _r , t _f		1		ns
Spectral width (FWHM)	$\Delta\lambda$		7		nm
Aperture size	WxH		200x10		um
Beam Divergence (Perpendicular)	$\theta \perp$	22	25	28	°
Beam Divergence(Parallel)	$\theta //$	7	11	13	°
Temperature coefficient of wavelength			0.27		nm/°C
Temperature coefficient of optical power			-0.4		%/°C

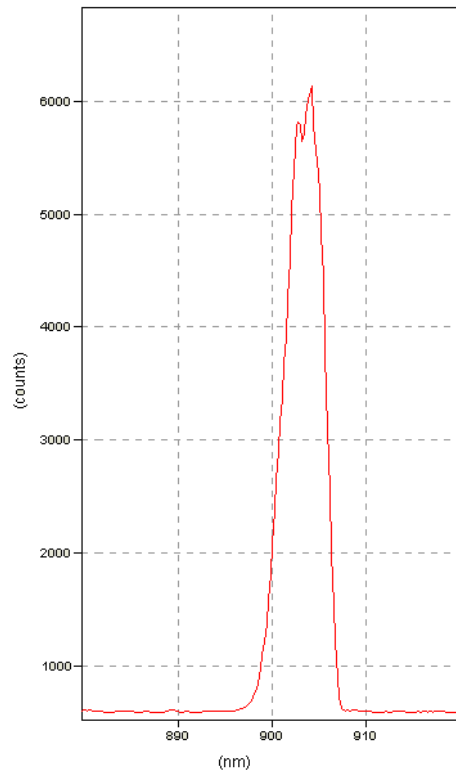
NOTICE: The above product specifications are subject to change without notice.

The typical curve

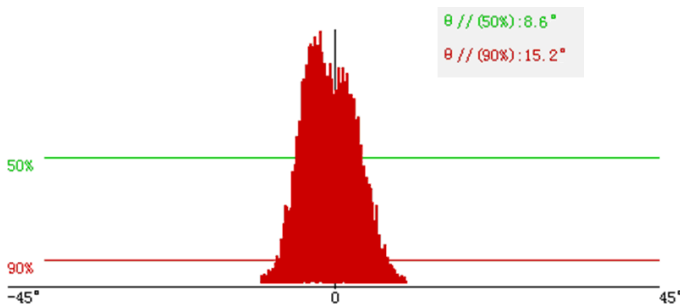
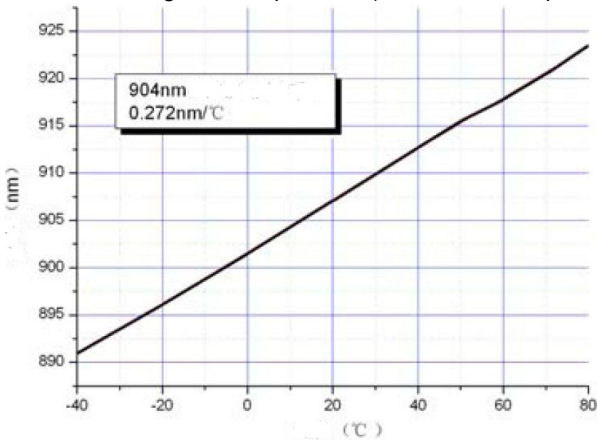
Optical output power P_{opt} and forward voltage V_f vs. forward current I_f ($T_A = 25^\circ C$)



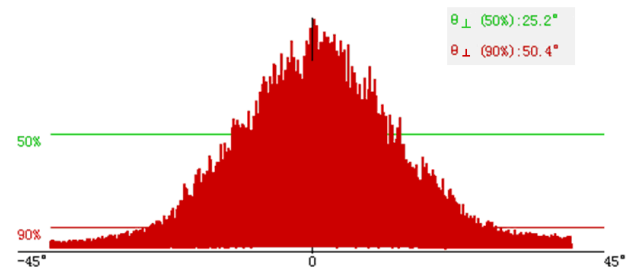
Optical spectrum, relative intensity I_{rel} vs. wavelength λ ($T_A = 25^\circ C, P_{opt} = 75 W$)



Wavelength vs temperature ($T_A = 25^\circ C, P_{opt} = 75 W$)

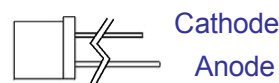
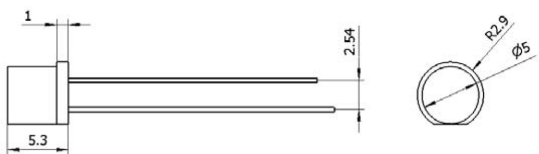


Far-field distribution parallel to junction
 I_{rel} vs. $\theta_{||}$ ($T_A = 25^\circ C, P_{opt} = 75 W$)



Far-field distribution perpendicular to junction
 I_{rel} vs. θ_{\perp} ($T_A = 25^\circ C, P_{opt} = 75 W$)

The package Dimensions and PIN description



The cautions

- 1: The above product specifications are subject to change without notice.
- 2: The suitable ESD protection is required in storage, transportation and using