


**905nm 50W High Power Pulsed Laser Diode**
**905nm Pulsed-mode LD, 50W Output Power, Plastic Package**

WSPLD-905-050-1

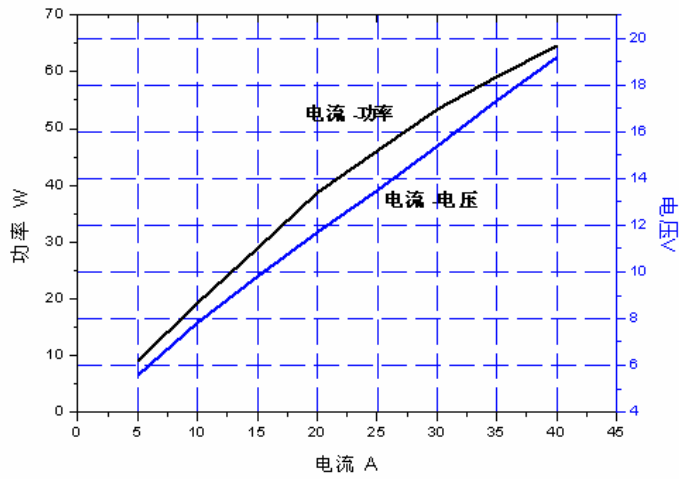
Wavespectrum Laser Group .

[www.wavespectrum-laser.com](http://www.wavespectrum-laser.com)

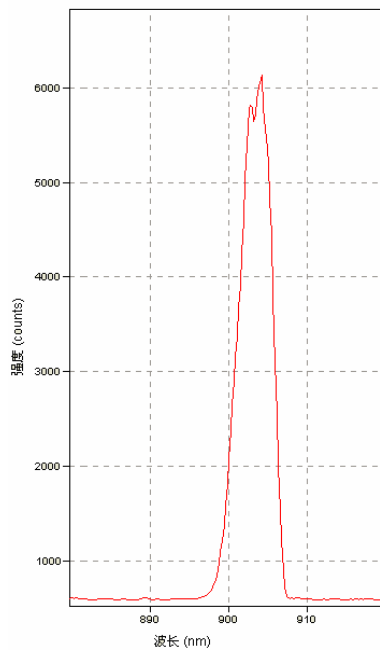
PARAMETER	SYMBOL	VALUE	UNIT
Reverse Voltage	$V_r$	3.0	V
Peak power	$P_{peak}$	65	W
Peak forward current	$I_F$	40	A
Pulse Width	$t_p$	200	ns
Duty Ratio	d.c	%	0.1
Operating Temperature	$T_{op}$	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Lead soldering temperature (10 sec.)	$T_{is}$	260	°C
<b>Features:</b> <ul style="list-style-type: none"> <li>● 905nm pulsed-mode laser diode</li> <li>● Low Cost Plastic Package</li> <li>● Epitaxial layer stacking structure</li> <li>● Luminous aperture: 200 <math>\mu</math> m X 7 <math>\mu</math> m</li> </ul>			
<b>Applications:</b> <ul style="list-style-type: none"> <li>● Range finding</li> <li>● Infrared illumination</li> <li>● Laser radar</li> <li>● Surveying equipment</li> </ul>			
<b>Specifications</b>	<b>WSPLD-905-050-1</b>		
	Min	Type	Max
Center Wavelength@25°C	895nm	905nm	915nm
Spectral Width (FWHM)	----	7nm	----
Peak Power	45W	50W	60W
Emitter quantity	2		
Emitter Size	----	200um*7um	----
Beam Divergence (FWHM)	----	11° <sub>⊥</sub> x 25° <sub>//</sub>	----
Threshold Current (Typ.)	0.5A	0.75A	1.0A
Temperature Coefficient of Wavelength	----	0.28nm / °C	----



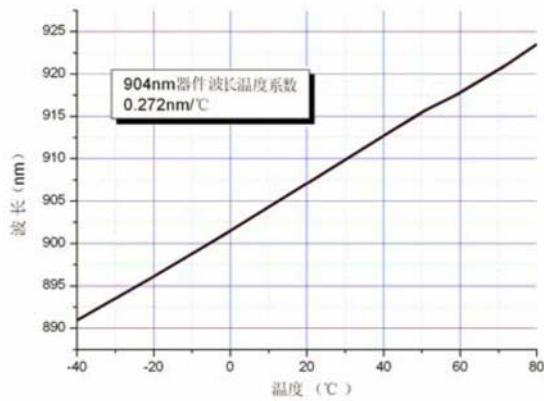
### 1: Power –Current, Voltage-Current Curve



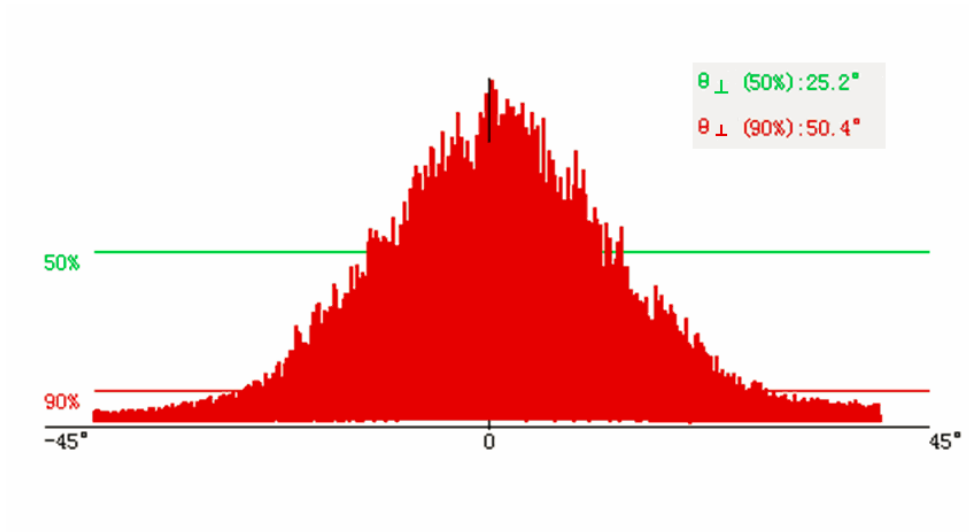
### 2: Spectrogram



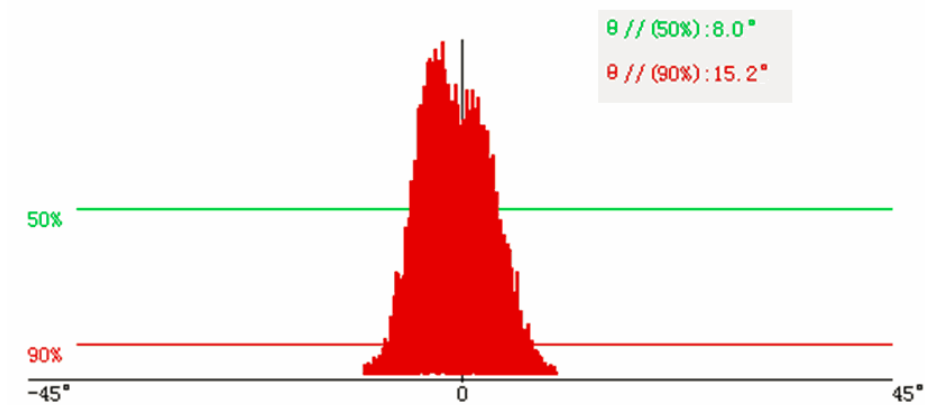
### 3: Wavelength-Temperature Curve



#### 4: Perpendicular divergence Angle



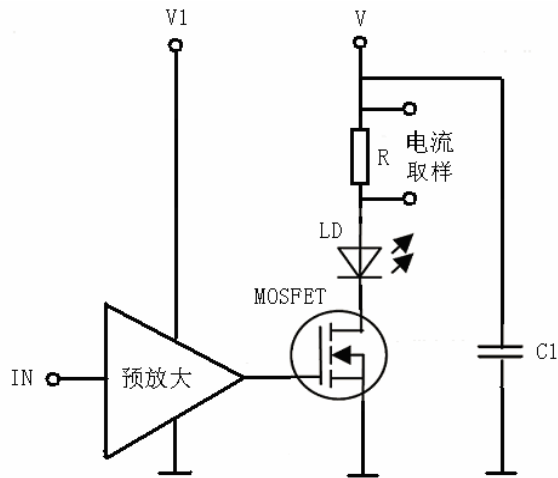
#### Level divergence Angle



#### 5: Near-field spot



## 6: Detection circuit



### Test condition:

F=5kHz Tw=200ns V1=12V IP=25A

### Recommend Circuit and parameter:

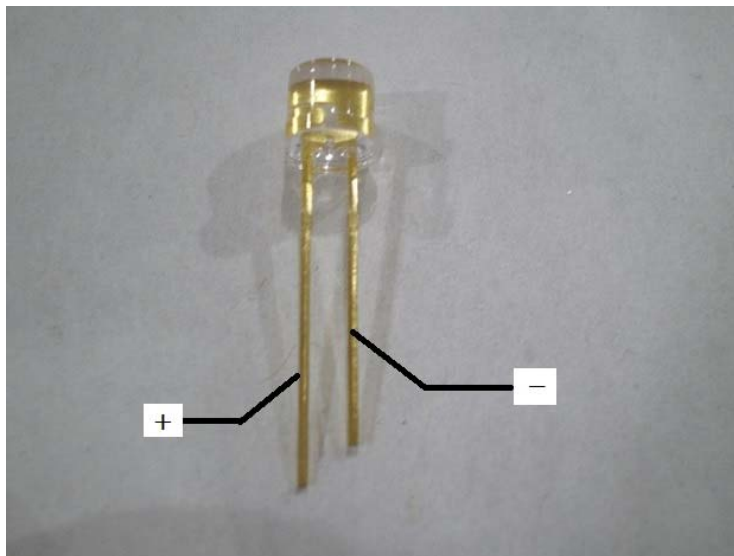
Sample Resistor: 0.1  $\Omega$

MOSFET: IRF 7478

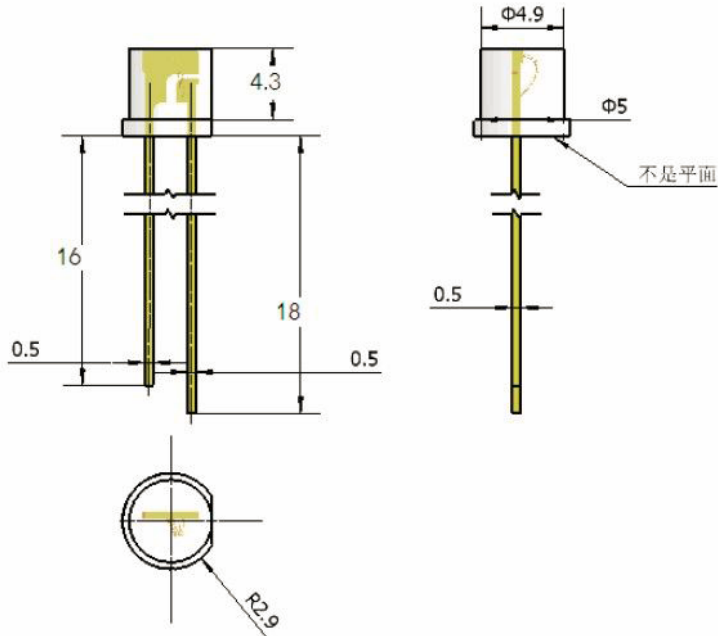
Preamp: MAXIM 5048B

Capacitor C1: 1000  $\mu$ F

## 7: PIN definition



## 8: Outline drawing



Electrically shorten LD module and store in non-extreme conditions.

Suggest using the constant current power supply.



Website: [www.wavespectrum-laser.com](http://www.wavespectrum-laser.com)

Email: [info@wavespectrum-laser.com](mailto:info@wavespectrum-laser.com)



Wavespectrum Laser, Inc.  
[www.wavespectrum-laser.com](http://www.wavespectrum-laser.com)  
[wavespectrumlaser@gmail.com](mailto:wavespectrumlaser@gmail.com)

