

# Egismos DATASHEET

## 980m Compact Laser Diode Modules Key features

Visible light  $\lambda = 980\text{nm}$   
Output power  $\approx 50\text{mW}$   
Package type  $= 5.6\text{mm}\phi$   
High reliability

### Applications

General Purpose Infrared Red Laser Light Source  
Optical Communication & Infrared Red Laser Module for Industry Application  
Thermal Device & Medical Instruments



US-D6-4-980-50

### Laser Diode Solutions

US-D6-4-980-40 is a MOCVD grown 980nm band laser diode. It's an attractive light source, with a typical light output power of 50mW. It's suitable for use as high reliability laser diode in a wide range of industrial application.

### Electrical and Optical Characteristics at $T_c = 25^\circ\text{C}$

Item	Symbols	Min.	Typ.	Max.	Unit	Condition
Threshold Current	$I_{th}$	-	12	20	mA	-
Operating Current	$I_{op}$	-	75	100		$P_o = 50\text{mW}$
Operating Voltage	$V_{op}$	1	1.5	2.1	Volt	$P_o = 50\text{mW}$
Slope efficiency	$\eta$	0.5	0.8	-	mW/mA	30mW-10mW/ I <sub>30mW</sub> -I <sub>10mW</sub>
Lasing Wavelength	$\lambda_p$	965	980	995	nm	$P_o = 50\text{mW}$
Beam Divergence	$\Theta_{//}$	8	12	14	deg	$P_o = 50\text{mW}$
	$\Theta_{\perp}$	30	35	40	deg	$P_o = 50\text{mW}$

**Egismos**

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## Absolute Maximum Rating at Tc=25°C

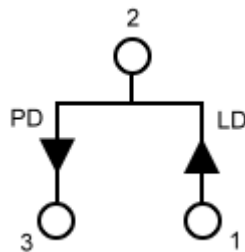
Items	Symbols	Values	Unit
Optical output power	Po	50	mW
Reverse voltage(LD)	V <sub>RL</sub>	2	V
Operating Temperature	Tc	-10~+40	°C
Storage Temperature	Ts	-15~+85	°C

Note: Pulse condition: Pulse width ≤ 1μs, duty ≤ 50%

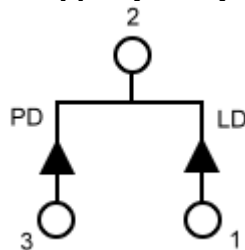


US-D6-4-980-50

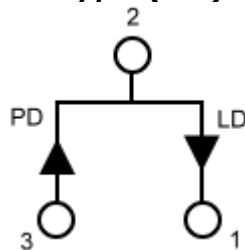
## Package Type



**P type (P,U,C)**



**M type (M,R)**



**N type (N,L,A)**

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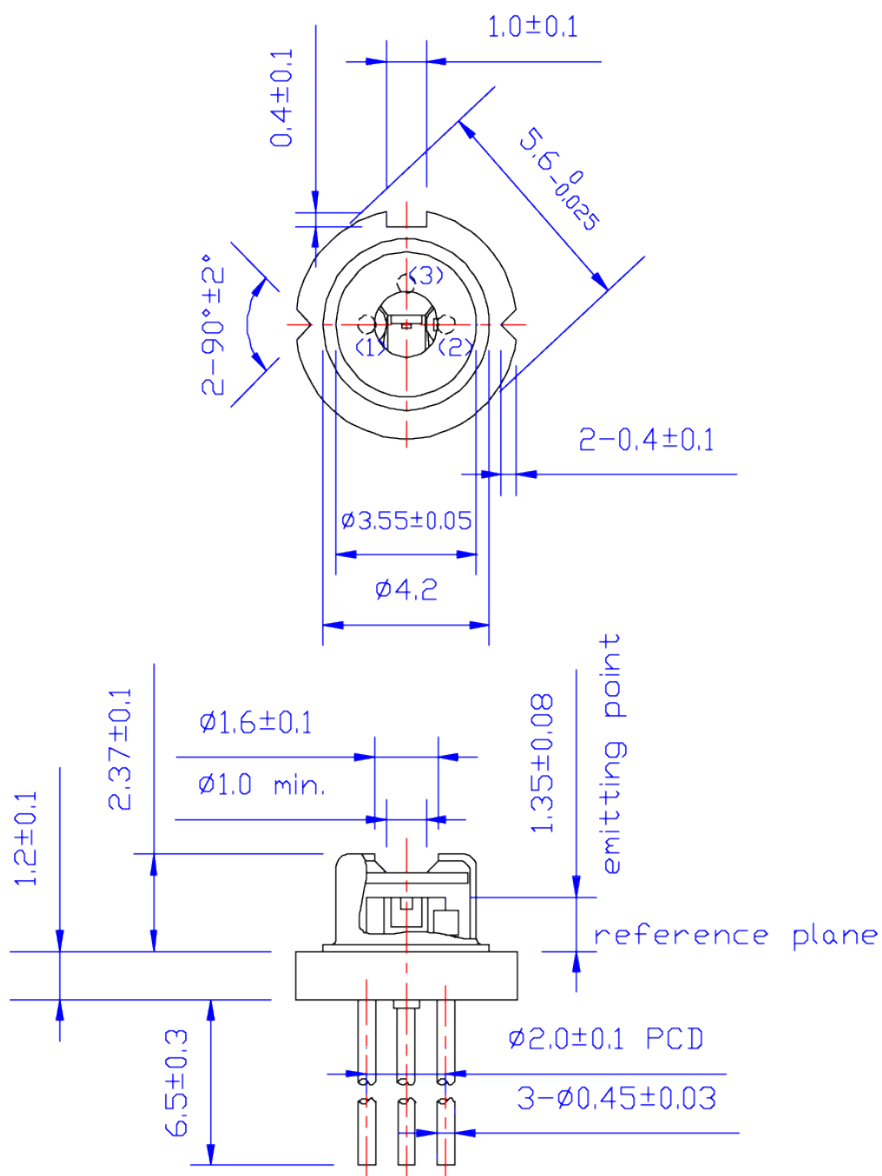
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# Egismos *DATASHEET*

Laser Diode Package Drawing



US-D6-4-980-50



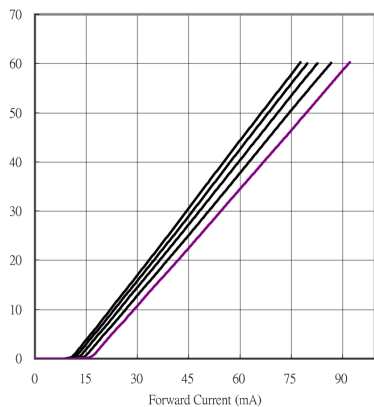
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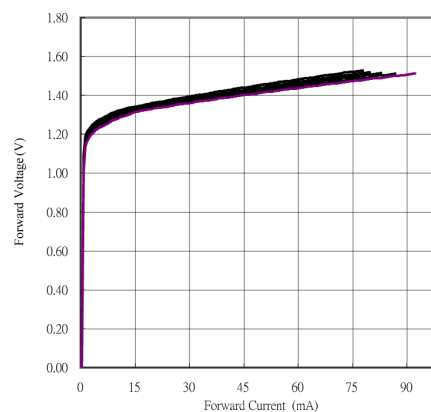
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## Typical characteristic curves

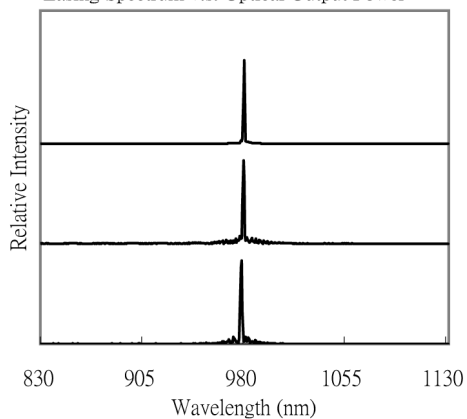
Optical Output Power v.s. Forward Current



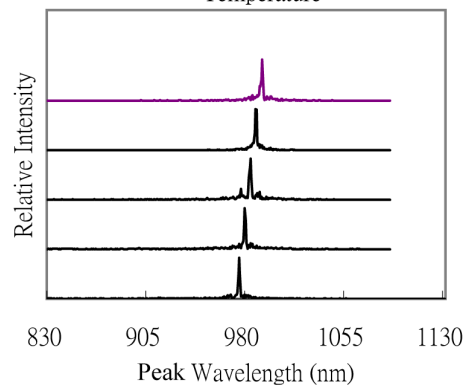
Forward Voltage v.s. Forward Current



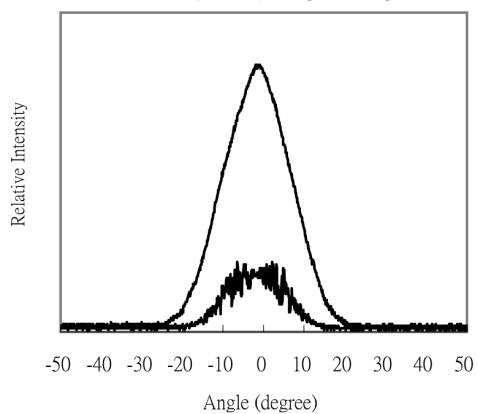
Lasing Spectrum v.s. Optical Output Power



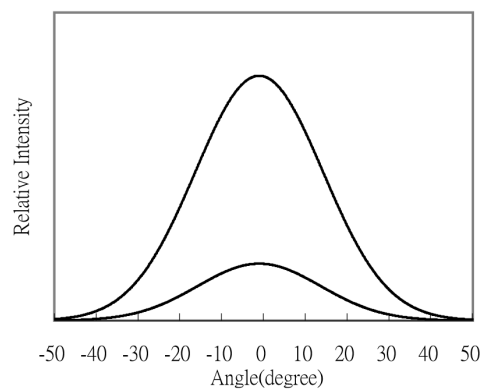
Lasing Spectrum v.s. Case Temperature



Far-Field Pattern(Parallel) vs. Optical Output Power



Far-Field Pattern(Perpendicular) vs. Optical Output Power



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