

80/70mW High Power Laser Diode with a Detachable Fiber**Description**

SLU301VR is a high power laser diode based on the SLD301V with a detachable fiber.

Direct coupling to a fiber having an FC connector is possible without any optical adjustment.

Features

- Detachable fiber
- Built-in photo diode

Application

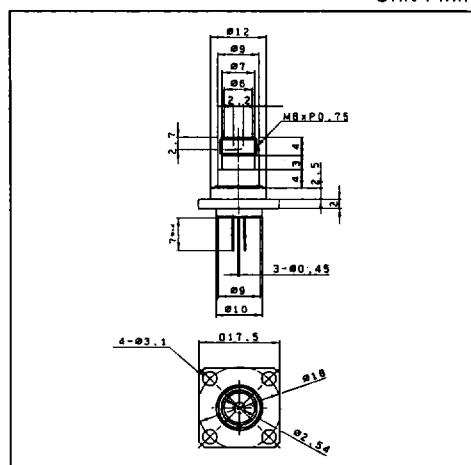
- Solid state laser pumping
- Medical uses

Structure

GaAlAs double hetero-type laser diode

Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)**Package Outline**

Unit : mm



(Typ.)

GI fiber

Core dia. 200 μm

NA = 0.2

L = 2m

(Option)

GI fiber

Core dia. 100 μm

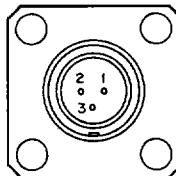
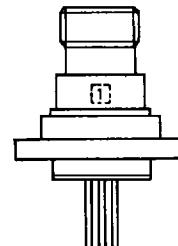
NA = 0.2

L = 2m

• Radiant power output	P ₀	80	mW	70	mW
• Recommended radiant power output	P ₀	72	mW	63	mW
• Reverse voltage	V _R	2	V	2	V
	LD				
	PD	15	V	15	V
• Operating temperature	To _p r	- 10 to + 50 $^\circ\text{C}$		- 10 to + 50 $^\circ\text{C}$	
• Storage temperature	T _{stg}	- 40 to + 85 $^\circ\text{C}$		- 40 to + 85 $^\circ\text{C}$	

Pin Configuration

No.	Function
1	LD cathode
2	LD anode
3	COMMON

Bottom View**Mark**

E89111A13 - ST

Electrical • Optical Characteristics ($T_c = 25^\circ\text{C}$)

Item	Symbol	Condition* ¹	Min.	Typ.	Max.	Unit
Threshold current	I _{th}			150		mA
Operating current	I _{op}	a, b		300		mA
Operating voltage	V _{op}	a, b		1.9		V
Wavelength* ²	λ_p	a, b	770		840	nm
Radiation angle* ³ (F.W.H.M)	X	a		10		degree
		b		10		
	Y	a		15		
		b		15		
Monitor current	I _{mon}	a, b $V_R = 10V$		0.15		mA

Note)

*1 a : $P_o = 72\text{mW}$ (Using standard fiber)

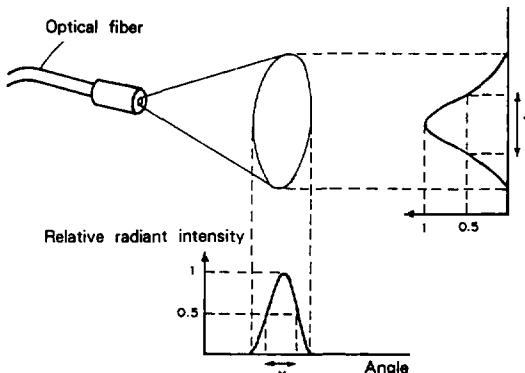
b : $P_o = 63\text{mW}$ (Using optional fiber)

*2 Classification of wavelength

Type	Wavelength (nm)
SLU301VR-1	785 ± 15
SLU301VR-2	810 ± 10
SLU301VR-3	830 ± 10

Type	Wavelength (nm)
SLU301VR-21	798 ± 3
24	807 ± 3
25	810 ± 3

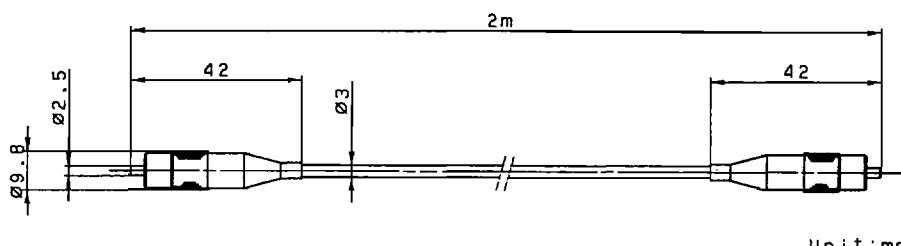
*3 Radiation angle

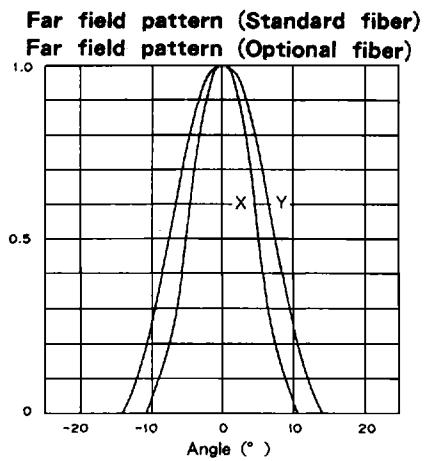
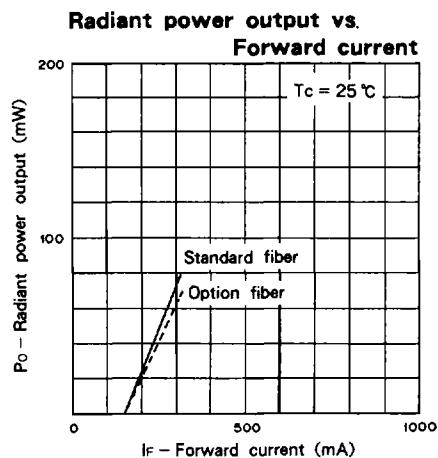


X : F.W.H.M of radiation beam in the narrow direction.

Y : F.W.H.M of radiation beam in the wide direction.

Fiber Package Outline



Typical Characteristics (T_c = 25 °C)

How to order the SLU300 series

When ordering please be sure to specify the required wavelength and type of optical fiber according to the below specifications.

SLU □□□ □□-□□-□□
 (1) (2) (3) (4)

- | | |
|-------------------------|--------------------|
| (1) LD chip | 301 to 304 |
| (2) Package | VR, XR |
| (3) Wavelength category | 1 to 3, 21, 24, 25 |
| (4) Optical fiber | 01 to 04 |

Combination of LD and Optical fiber

Optical fiber LD chip	01	02	03	04
301	○	○	×	×
302	○	○	×	×
303	×	×	○	○
304	×	×	○	○

○ : Applicable
 01, 03 : Standard fiber
 02, 04 : Option fiber

○ : Applicable
 × : Not applicable

Optical fiber specification

Item Code	Core dia. (μm)	NA	Length (m)
01	200	0.2	2
02	100	0.2	2
03	400	0.2	2
04	230	0.3	2

Example

For the purchase of SLU304XR (rank 25) with optical fiber of 400 μm core diameter

- SLU304XR - 25 - 03