SONY

SLU301XR

80/70mW High Power Laser Diode with a Detachable Fiber T-41-05

Description

SLU301XR is a high power laser diode based on the SLD301XT 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

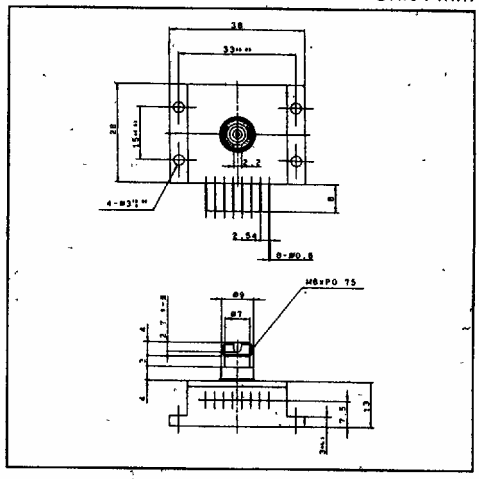
- Solid state laser pumping
- Medical uses

Structure

GaAlAs double hetero-type laser diode

Package Outline

Unit : mm



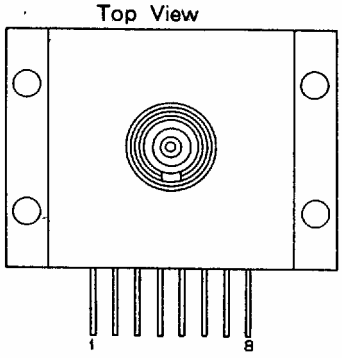
Absolute Maximum Ratings (Tth = 25°C)

		(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_O	80	mW	70	mW
• Recommended radiant power output	P_O	72	mW	63	mW
• Reverse voltage	V_R LD	2	V	2	V
	PD	15	V	15	V
• Operating temperature	Topr	−10 to +50	°C	−10 to +50	°C
• Storage temperature	Tstg	−40 to +85	°C	−40 to +85	°C
• TE cooler operating current	I_T	2.5	A	2.5	A

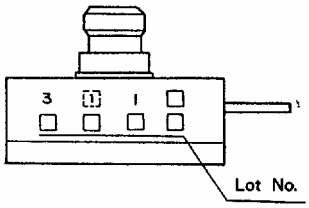
Pin Configuration

No.	Function
1	TE cooler (−)
2	Thermistor
3	Thermistor
4	LD anode
5	LD cathode
6	PD cathode
7	PD anode
8	TE cooler (+)

Top View



Mark



Electrical · Optical Characteristics (Tth = 25℃)

Item	Symbol	Condition*1	Min.	Typ.	Max.	Unit
Threshold current	Ith			150		mA
Operating current	Iop	a, b		300		mA
Operating voltage	Vop	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	Imon	a, b V_R = 10V		0.15		mA
Thermistor resister	Rth	Tth = 25℃		10		kΩ

Note)

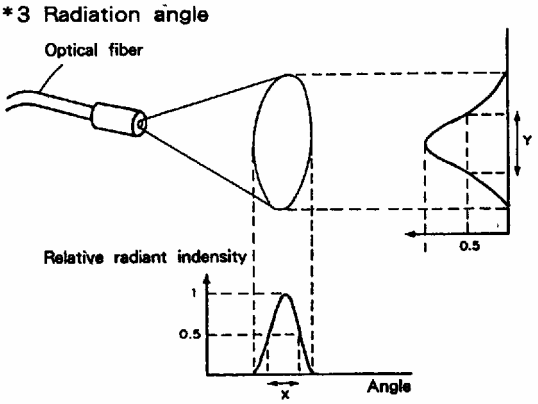
*1 a : Po = 72mW (Using standard fiber)
b : Po = 63mW (Using optional fiber)

*2 Classification of wavelength

Type	Wavelength (nm)
SLU301XR-1	785 ± 15
SLU301XR-2	810 ± 10
SLU301XR-3	830 ± 10

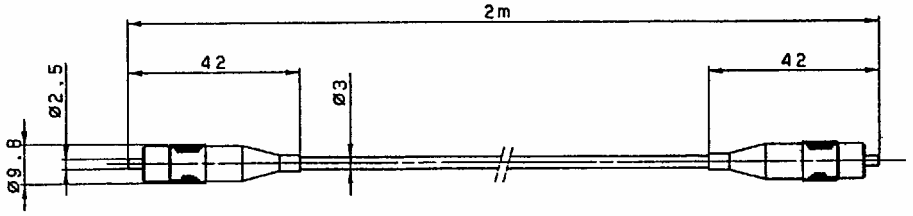
Type	Wavelength (nm)
SLU301XR-21	798 ± 3
24	807 ± 3
25	810 ± 3

*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

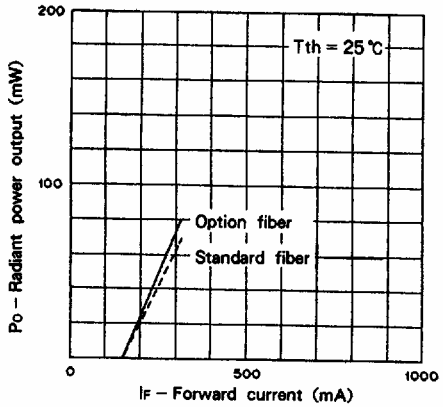


Unit : mm

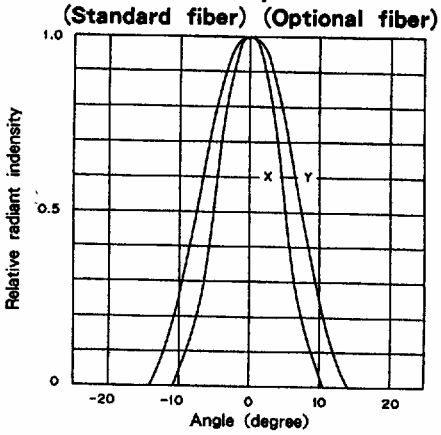
T-41-0

Typical Characteristics (Tth = 25°C)

Radiant power output vs. Forward current

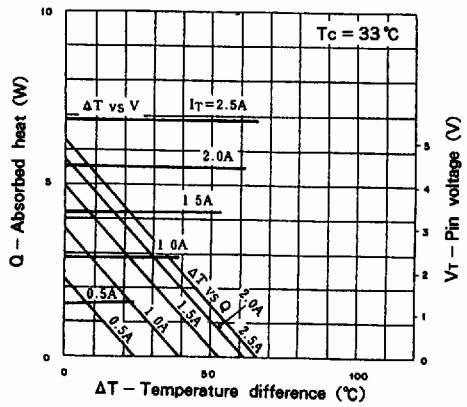


Far field pattern
(Standard fiber) (Optional fiber)



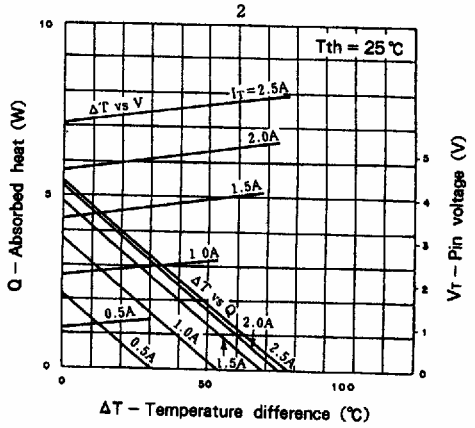
TE cooler characteristics

1

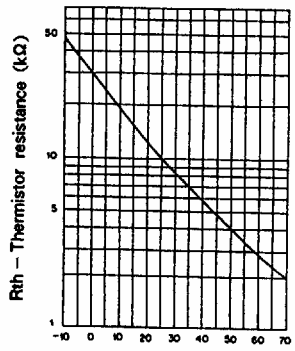


ΔT : Tc – Tth
Tth : Termistor temperature
Tc : Case temperature

2



Thermistor characteristics



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

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

○ : Applicable
× : Not applicable

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

Optical fiber specification

Code \ Item	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