

# ROITHNER LASERTECHNIK GIRDH

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# SPL405-45-4

# **TECHNICAL DATA**



# **Pigtailed Coaxial Laser Diode**

## **Features**

- 405 nm
- PM Fiber
- Coaxial package

# **Applications**

- Medical laser treatment
- Printing

# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

### **Electrical Connection**

	ELECTROCIATIO CERCITIVE DEVICES
Pin Configuration	Bottom View
PIN Function  1 LD Anode  2 n.c.  3 LD Cathode	

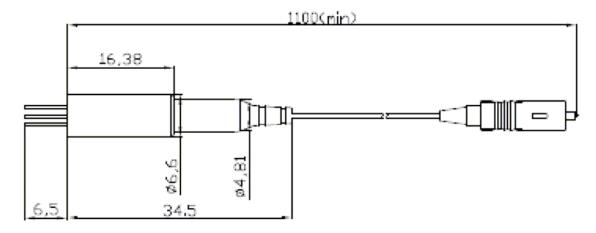
# Specifications (25°C)

Туре	Min.	Тур.	Max.	Unit	
Optical Specification					
Output Power P <sub>F</sub>	ı	45	-	mW	
Center Wavelength λ <sub>C</sub>	400	405	410	nm	
Spectral Width Δλ	-	2	-	nm	
Fiber Characteristics					
Fiber Kind	4µm single mode				
Fiber Length	-	0.8	1.0	m	
Connector	FC/ST/SMA-905				
Electrical Specification					
Slope Efficiency E <sub>S</sub>	1.0	1.5	2.0	mW/mA	
Threshold Current Ith	-	100	130	mA	
Operation Current I <sub>O</sub>	-	200	230	mA	
Operation Voltage V <sub>f</sub>	-	4.1	4.6	V	
Package Style	Coaxial				
Absolute Maximum Ratings					
Reverse Voltage V <sub>r</sub>	2.0			V	
Operating Temperature T <sub>Op</sub>	-10 +40			°C	
Storage Temperature T <sub>stg</sub>	-35 +85			°C	
Lead Soldering Temperature (10 sec.)	260			°C	

The above specifications are for reference purpose only and subjected to change without prior notice.



# Package Dimensons (Unit: mm)



Beam shape after fiber:





## Safety of Laser light

Laser Light can damage the human eyes and skin. Do not expose the eye or skin directly to any laser light and/or through optical lens. When handling the LDs, wear appropriate safety glasses to prevent laser light, even any reflections from entering to the eye. Focused laser beam through optical instruments will increase the chance of eye hazard.



• These LDs are emitting invisible light.

#### **Cautions**

#### 1. Operating methode

- This LD shall change its forward voltage requirement and optical ouput power according to temperature change. Also, the LD will require more operation current to maintain same ouput power as it degrades. In order to maintain output power, use of APC (Automatic Power Control) is recommended. Which use monitor feedback to adjust the operation current.
- Confirm that electrical spike current generated by swithing on and off does not exceed the
  maximum operating current level specified herein above as absolute maximum rating. Also,
  employ appropriat countermeasures to reduce chattering and/or overshooting in the circuit.

### 2. Static Electricity

• Static electricity or electrical surges will reduce and degrade the reliability of the LDs. It is recommended to use a wrist trap or anti-electrostatic glove when handeling the product.

#### 3. Absolute Maximum Rating

Active layer of LDs shall have high current density and generate high electric field during its
operation. In order to prevent excessive damage, the LD must be operated strictly below
absolute maximum rating.

