



## SPL650-3-105M-PD



### TECHNICAL DATA

## Pigtailed Coaxial Laser Diode

#### Features

- 650 nm
- 105µm MM Fiber
- Coaxial package
- Built-in PD

#### Applications

- Medical laser treatment
- Printing
- Aiming beam

#### Electrical Connection



Pin Configuration		Bottom View								
	<p><i>n-type</i></p> <table border="1"> <thead> <tr> <th>PIN</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LD Anode</td> </tr> <tr> <td>2</td> <td>LD Cathode, PD Cathode</td> </tr> <tr> <td>3</td> <td>PD Anode</td> </tr> </tbody> </table>	PIN	Function	1	LD Anode	2	LD Cathode, PD Cathode	3	PD Anode	
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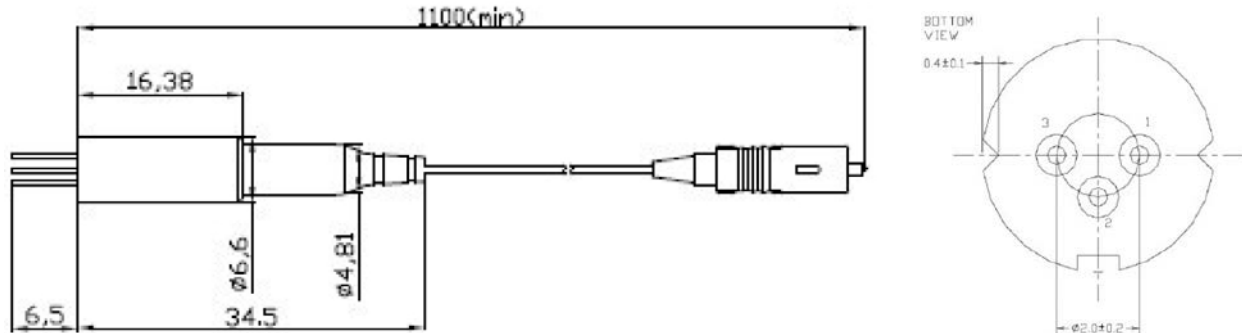
#### Specifications (25°C)

Type	Min.	Typ.	Max.	Unit
<b>Optical Specification</b>				
Output Power $P_F$	-	3	-	mW
Center Wavelength $\lambda_C$	645	655	660	nm
Spectral Width $\Delta\lambda$	-	2	-	nm
<b>Fiber Characteristics</b>				
Fiber Core	-	105	-	µm
Fiber Length	-	0.8	1.0	m
Connector	FC/SC/SMA905			
<b>Electrical Specification</b>				
Slope Efficiency $E_s$	0.4	0.6	1.0	mW/mA
Threshold Current $I_{th}$	-	20	25	mA
Operation Current $I_O$	-	36	45	mA
Operation Voltage $V_f$	-	2.3	2.6	V
Monitor Current $I_m$	0.05	0.15	0.3	mA
PD Reverse Voltage	-	30	-	V
Package Style	Coaxial			
<b>Absolute Maximum Ratings</b>				
Reverse Voltage $V_r$	2.0			V
Operating Temperature $T_{Op}$	-10 ... +50			°C
Storage Temperature $T_{stg}$	-40 ... +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 Dimensions (Unit: mm)



## 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.



## Cautions

### 1. Operating methode

- This LD shall change its forward voltage requirement and optical output power according to temperature change. Also, the LD will require more operation current to maintain same output 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 switching on and off does not exceed the maximum operating current level specified herein above as absolute maximum rating. Also, employ appropriate 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 strap or anti-electrostatic glove when handling 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.



**NOTE**  
LASERDIODE  
MUST BE COOLED