



# DATA SHEET

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O K I L A S E R P R O D U C T S

## **OL5300N-03** **Surface Mount Laser Diode Module** **(1550 nm, 0.3 mW)**

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November 1999



**Oki Semiconductor**



# Oki Semiconductor

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## OL5300N-03 Laser Diode Module

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Surface Mount LD Module for Single-Mode Fiber

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### INTRODUCTION

Oki Semiconductor's OL5300N-03 surface mount laser diode module feature a 1.5- $\mu\text{m}$ , InGaAsP/InP laser diode providing 1550-nm output at 0.3 mW. These low-cost laser diodes is available in an 8-pin Mini-Dil package, has a built-in monitor photodiode, and is coupled to a single-mode fiber pigtail.

### FEATURES

- InGaAsP/InP laser diode
- Fiber output: 1550-nm output at 0.3 mW
- 1.5- $\mu\text{m}$  technology
- Single-mode fiber
- 8-pin Mini-Dil package
- Includes a photodiode for power monitoring

### APPLICATION

- Optical transmission systems
- Digital video systems
- LAN systems
- Optical measurement / OTDRs

## ELECTRICAL CHARACTERISTICS

### Absolute Maximum Ratings (ambient temperature Ta=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Units
Fiber Output Power	Pf	2	mW
Laser diode reverse voltage	$V_{R(LD)}$	2	V
Photo diode forward current	$I_{F(PD)}$	10	mA
Photo diode forward voltage	$V_{F(PD)}$	15	V
Operating Temperature (Ta)	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +85	°C
Lead Soldering Temperature (10 sec)	Tsol	260	°C

Exceeding these maximum ratings could cause immediate damage or lead to permanent deterioration of the device.

### Optical and Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Fiber output power	Pf	CW	0.3	-	-	mW
Threshold current	Ith	-	-	-	40	mA
Laser diode forward voltage	$V_{OP(LD)}$	Pf=0.3 mW	---	---	1.5	V
Center wavelength	$\lambda_c$	Pf=0.3 mW, RMS Ta=40 to 65°C	1430	1550	1570	nm
RMS Spectral width	$\sigma$	Pf=1 mW, RMS ( $\sigma$ )			5	nm
Tracking error	TER	Im=constant@ Pf=0.3 mW (25°C)			1.5	dB
Rise and fall time		10 to 90 %			0.5	ns
Monitor current	Im	Pf=0.3 mW	100		600	uA

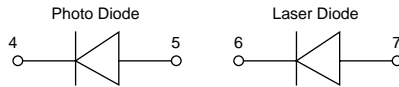
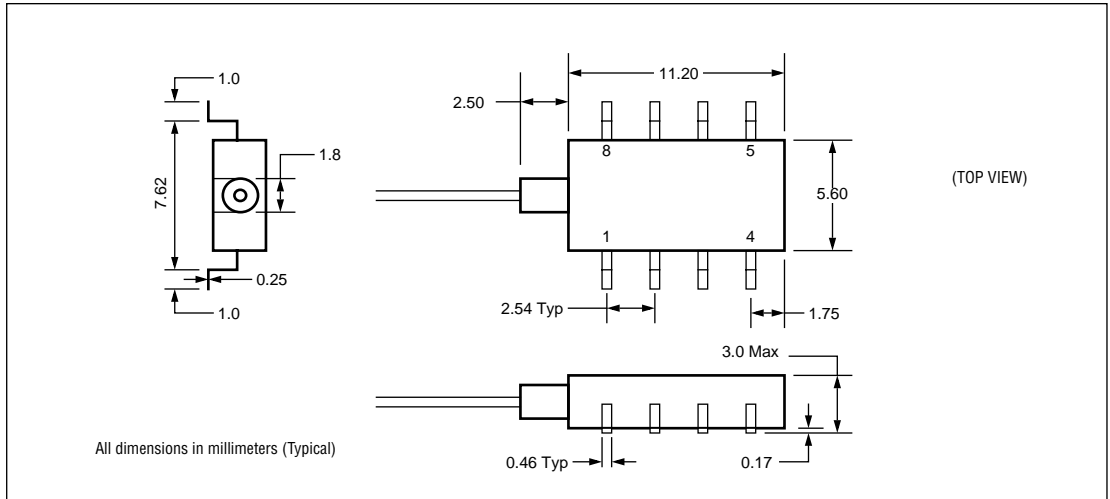
### Fiber Pigtail Specifications

Parameter	Specifications	Units
Type	SM	---
Mode Field Diameter	10 +/-1	$\mu\text{m}$
Cladding Diameter	125 +/-2	$\mu\text{m}$
Jacket Diameter	900	$\mu\text{m}$
Length	1.0 (Minimum)	m
Connector	FC	---

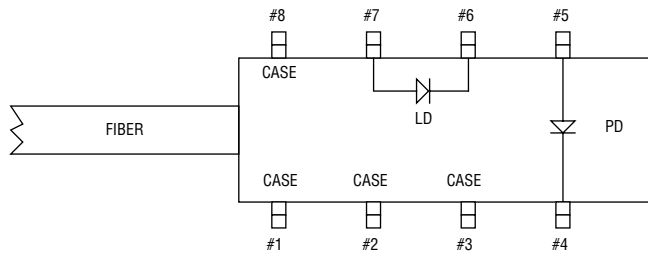
### Connector and Fiber Specifications

Connector	FC-PC, SC-PC, MUJ-PC etc	
Fiber	1.31- $\mu\text{m}$ single-mode fiber Diameter: 0.9 mm Color: Dark blue	Bending Radius: 20 mm (minimum) Heat resistant Length: Options (contact Oki Semiconductor)

**PACKAGE DIMENSIONS (UNITS: MM)**



LEAD CONNECTIONS (TOP VIEW)



**Pin Configuration**

Pin No.	Description	Pin No.	Description
01	Case Ground	05	PD Anode
02	Case Ground	06	LD Cathode
03	Case Ground	07	LD Anode
04	PD Cathode	08	Case Ground

**Notes**

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