



DATA SHEET

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

OL3300N-05 and OL3301N-05 Surface Mount Laser Diode Modules (1310 nm, 0.5 mW)

October 1999



Oki Semiconductor



CONTENTS

OL3300N-05 and OL3301N-05 Surface Mount LD Modules 1

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OL3300N-05 and OL3301N-05 LD Modules

Surface Mount LD Modules for Single-Mode Fiber

INTRODUCTION

Oki Semiconductor's OL3300N-05/OL3301N-05 family of surface mount laser diode modules feature a 1.3- μm , InGaAsP/InP laser diode providing 1310-nm output at 0.5 mW. These low-cost laser diodes are available in 8-pin Mini-Dil packages, have a built-in monitor photodiode, and are coupled to single-mode fiber pigtails.

FEATURES

- InGaAsP/InP laser diode
- Fiber output: 1310-nm output at 0.5 mW
- 1.3- μm technology
- Single-mode fiber
- 8-pin Mini-Dil package
- Includes a photodiode for power monitoring

APPLICATION

- Optical transmission systems
- OL3301N-05: OC-48, 2.488 Gbps
- OL3300N-05: 622 Mbps
- Gigabit Ethernet
- 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 reverse voltage	$V_{R(PD)}$	15	V
Operating Temperature	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)

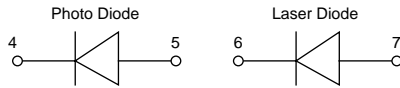
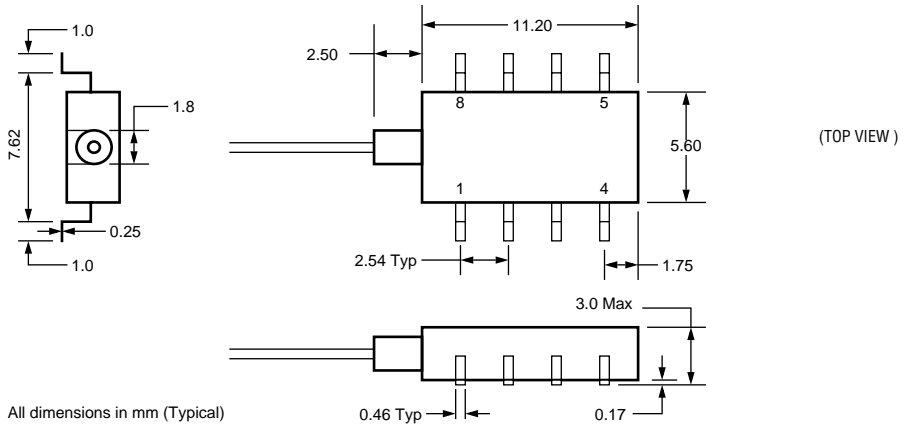
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Fiber output power	Pf	CW	0.5	-	-	mW
Threshold current	I _{th}	-	-	-	40	mA
Laser diode operating current	$I_{OP(LD)}$					mA
Laser diode forward voltage	$V_{OP(LD)}$	Pf = 0.5 mW	---	---	1.5	V
Center wavelength	λ_c	Pf = 0.5 mW, RMS Ta = 0 to 85°C	1270	-	1360	nm
RMS Spectral width	σ	Pf = 0.5 mW, RMS (σ)			7.7	nm
Tracking error	TER	I _m = constant@ Pf = 0.5 mW (25°C)			1.5	dB
Rise and fall time (OL3300N-05)		10 to 90 %			0.5	ns
Rise and fall time (OL3301N-05)					0.15	ns
Monitor current	I _m	Pf = 0.5 mW	300		1000	μA

Fiber Pigtail Specifications

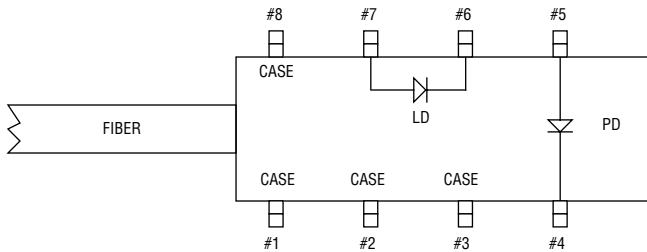
Parameter	Specifications	Units
Type	SM	---
Mode Field Diameter	10 +/-1	μm
Cladding Diameter	125 +/-2	μm
Jacket Diameter	900	μm
Length	1.0 (Minimum)	m
Connector	FC	---

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

The information contained herein can change without notice owing to product and/or technical improvements.

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