



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



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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	Ith	-	-	-	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	Im = 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	Im	Pf = 0.5 mW	300	-	1000	μ A

Fiber Pigtail Specifications

Parameter	Specifications	Units
Type	SM	---
Mode Field Diameter	10 +/-1	μ m
Cladding Diameter	125 +/-2	

PACKAGE DIMENSIONS

(Units: mm)

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Pin Configuration



Notes

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