

FEATURES

- 1,310 nm wavelength direct modulation InGaAsP/InP MQW-FP-LD
- Uncooled operation without TEC
- InGaAs monitor PIN photodiode
- 4 pin cylindrical TO package with single mode fiber pigtail with SC or FC connector



APPLICATIONS

- SONET OC-3/OC-12/OC-24 system
- SDH STM-1/STM-4/STM-8 system
- FTTC, FTTH
- Any other digital transmission systems

ABSOLUTE MAXIMUM RATINGS (T_c = 25 °C)

Parameter	Symbol	Rating	Unit
Storage Temperature	T _{stg}	-40 ~ +85	°C
Operating Temperature	T _{op}	-40 ~ +85	°C
Optical Output Power (CW)	P _f	2	mW
Laser Forward Current	I _{FL}	60	mA
Laser Reverse Voltage	V _{RL}	2	V
Monitor-PD Forward Current	I _{FP}	2	mA
Monitor-PD Reverse Voltage	V _{RP}	10	V

OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{op} = 25 °C)

Parameter	Symbol	Values			Unit	Conditions
		Min.	Typ.	Max.		
Threshold Current	I _{th}	-	5	15	mA	CW
Forward Voltage	V _{FL}	-	1.2	1.5	V	I _{th} + 20 mA
Optical Output Power ¹	P _f	0.2	-	-	mW	I _{th} + 20 mA
Peak Wavelength	λ _π	1,290	1,310	1,330	nm	CW
Spectral Width ²	Δλ	-	1.0	4.0	nm	CW
Bandwidth (-3 dB) ³	f _{3dB}	1.0	-	-	GHz	I _{th} + 20 mA
Monitor-PD Current	I _m	0.1	-	-	mA	I _{th} + 20 mA
Monitor-PD Dark Current	I _{dm}	-	-	1	nA	V _{RP} = 5 V
Monitor-PD Capacitance	C _m	-	10	20	pF	V _{RP} = 5 V

Note :

1. Measured values at pigtailed fiber end point.
2. Measured value in root mean square (RMS).
3. 50 Ω Impedance matching condition.

ORDERING INFORMATION

	LD Chip	Wavelength [nm]	Output Power [mW]	-	Fiber	Connector	Flange
L D	1	3	1	-	S	FP	1
Lightron Laser Diodes	1: FP-LD 2: DFB-LD 3: LED 4: VCSEL	3: 1,310 5: 1,550 6: 650 8: 850	1: >0.2 2: >0.5 3: >1.0 4: >1.5 5: >0.5 Iso. 6: >1.0 Iso. 7: >1.5 Iso.		R: Receptacle S: SMF pigtail M: MMF pigtail	NC: No Connector SP: SC/PC FP: FC/PC TP: ST/PC SA: SC/APC FA: FC/APC	0: No flange 1: UM1 2: UM2 3: DM 4: PM

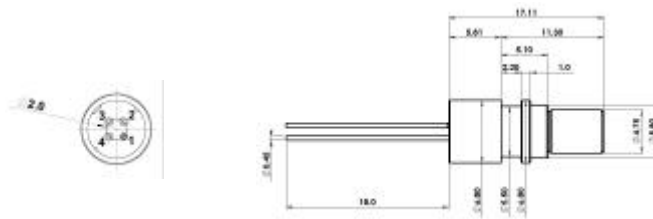
Note: *SMF*=single mode fiber, *MMF*=multi mode fiber, *Iso.*=with Isolator
UM=up screw mount flange, *DM*=down screw mount flange, *PM*=panel mount flange.

Example [LD131-SFP1] Lightron 1,310 nm FP-LD with 0.2 mW output power, single mode fiber-pigtailed FC/PC connector, and up-screw mount flange.

PACKAGE OUTLINE DIAGRAMS

Unit : [mm]

Receptacle type < LD13x-RNC0 >

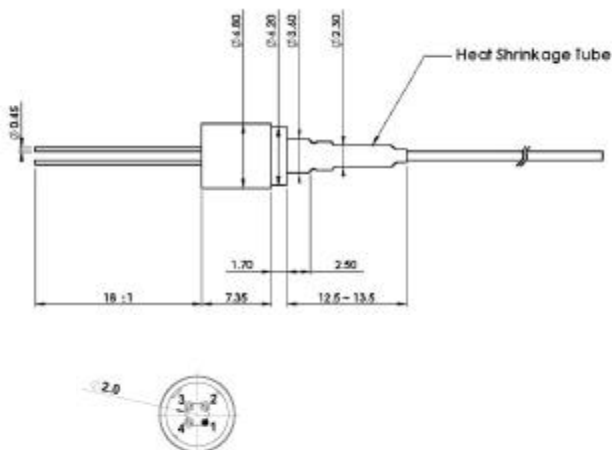


< TO package bottom view >



< 3D view >

Pigtail type with no flange < LD13x-xxx0 >



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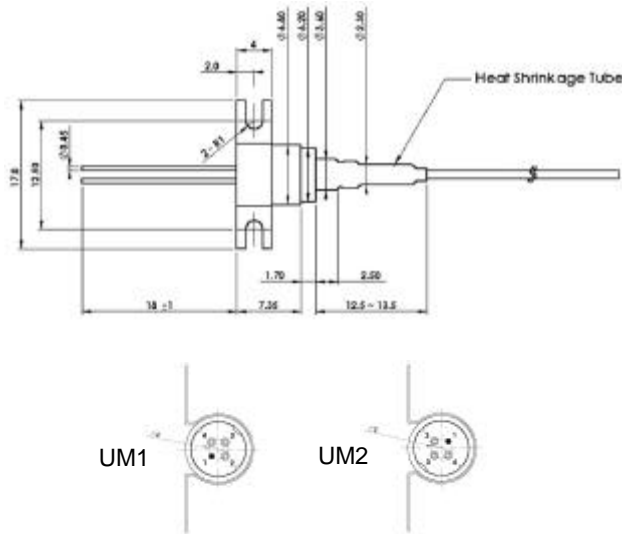


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1,310 nm FP Laser Diodes

LD13x Series

Pigtail type with up screw mount flange < LD13x-xxx1, LD13x-xxx2 >

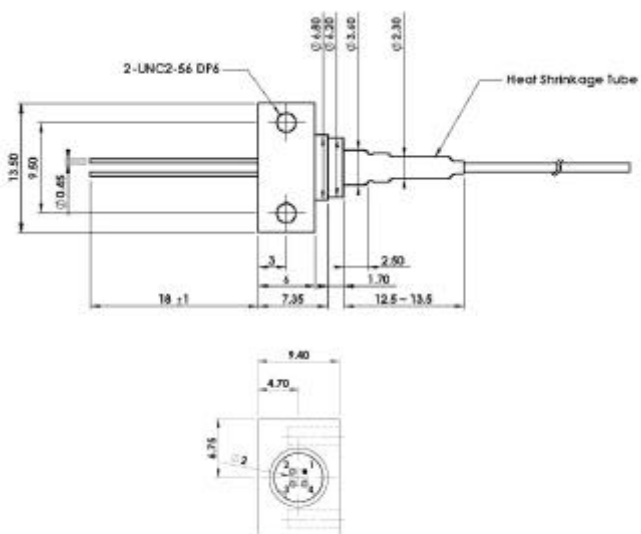


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Pigtail type with down screw mount flange < LD13x-xxx3 >

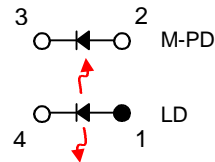
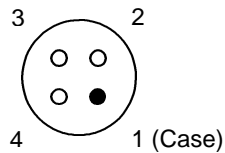


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ELECTRICAL PIN CONFIGURATION



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