

FEATURES

- 1.1 ~ 1.6 μm wavelength InGaAs PIN-PD
- Low dark current and high breakdown voltage
- Bandwidth greater than 1.5 GHz
- High linearity and low optical back reflection
- 3 pin coaxial TO package
- Fiber pigtailed or receptacle type package with optional connector



APPLICATIONS

- Fiber-optic analog optical link
- 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 |
| Reverse Voltage | V _{RP} | 25 | V |
| Forward Current | I _{FP} | 5 | mA |
| Power Dissipation | P _{diss} | 100 | mW |

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

| Parameter | Symbol | Values | | | Unit | Conditions |
|--------------------------------------|-------------------|--------|------|-------|------|--------------------------|
| | | Min. | Typ. | Max. | | |
| Breakdown Voltage | V _{BR} | 25 | 45 | - | V | I _{dark} = 1 μA |
| Dark Current | I _{dark} | - | - | 1 | nA | V _{RP} = 5 V |
| Total Capacitance | C _P | - | 0.5 | 1.0 | pF | V _{RP} = 5 V |
| Bandwidth (-3 dB) ¹ | f _{3dB} | 1.5 | - | - | GHz | - |
| Detection Range | λ | 1,100 | - | 1,650 | nm | - |
| Responsivity ² | R | 0.8 | 0.85 | - | A/W | V _{RP} = 5 V |
| Optical Back Reflection ² | BR | - | -45 | - | dB | - |

Note :

1. 50 W impedance matching condition.
2. Measured value at 1,310 nm wavelength.

InGaAs PIN Photodiodes LP10x Series

ORDERING INFORMATION

| | PD Chip | Wavelength | Back Reflection [dB] | – | Fiber | Connector | Flange |
|----------------------------|------------------|---|--|----------|---|---|--|
| LP | 1 | 0 | 4 | – | S | SA | 1 |
| Lightron Photodiode | 1: InGaAs PIN-PD | 0: Standard 3:1310 WDM 5:1550 WDM | 1: <-14 2: <-30 3: <-40 4: <-45 | | 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 |

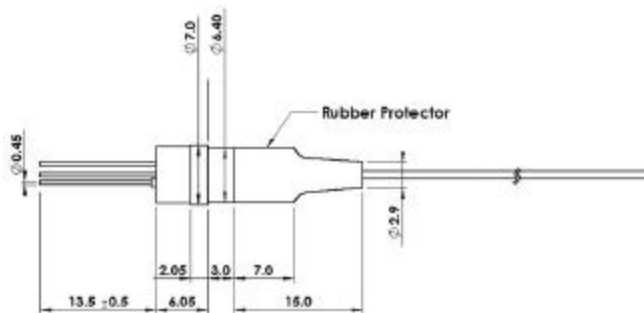
Note: 1310WDM=PD with 1,310 nm pass filter, 1550WDM= PD with 1,550 nm pass filter, SMF=single mode fiber, MMF=multi mode fiber, UM=up screw mount flange, DM=down screw mount flange, PM=panel mount flange.

Example [LD104-SSA1]: Lightron InGaAs PIN-PD with -45 dB optical back reflection, single mode fiber-pigtailed SC/APC connector, and up-screw mount flange.

PACKAGE OUTLINE DIAGRAMS

Unit : [mm]

No Flange type < LP10x-xxx0 >



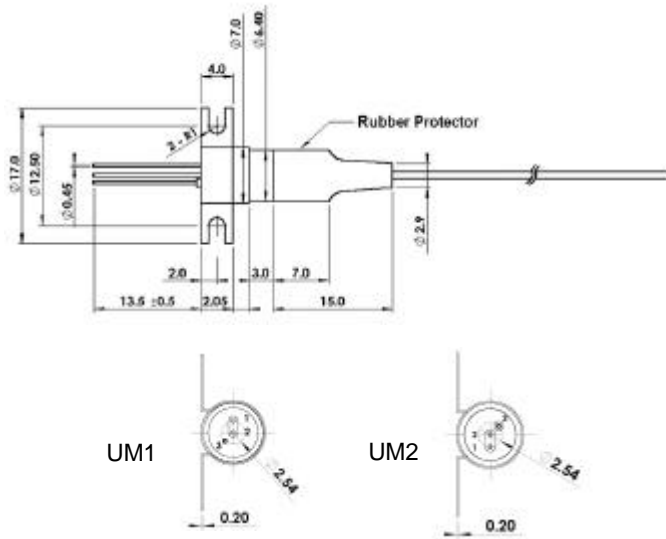
< TO package bottom view >



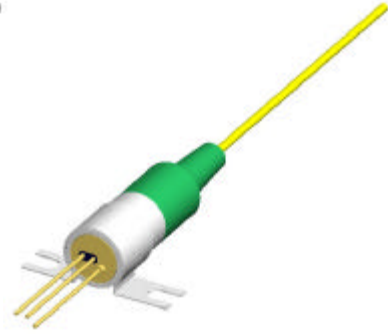
< 3D view >

InGaAs PIN Photodiodes LP10x Series

Pigtail type with up screw mount flange < LP10x-xxx1, LP10x-xxx2 >

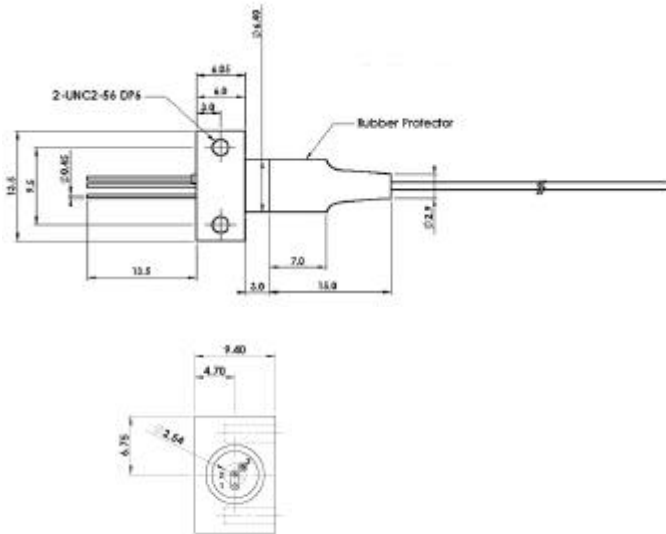


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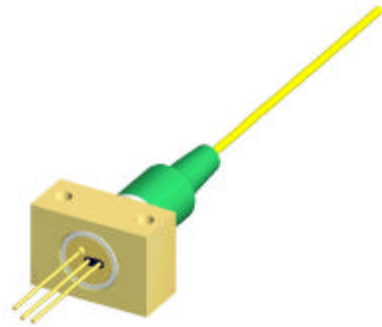


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Pigtail type with down screw mount flange < LP10x-xxx3 >

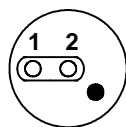


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ELECTRICAL PIN CONFIGURATION



3 (Case)

