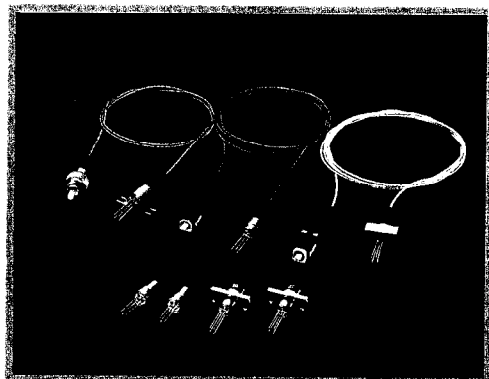




FEATURES

- InGaAs PIN-PD with transimpedance amplifier and decoupling capacitor operating at 622 Mbps
- Excellent sensitivity and overload characteristics
- High transimpedance gain with AGC circuit
- Single +5 V or +3.3 V power supply voltage
- Differential or single ended output
- Cylindrical TO can, receptacle and fiber pigtailed type package

APPLICATIONS

- 622 Mbps SONET/SDH receiver
- FTTH, FTTC, fast ethernet system
- Any standard digital fiber-optic receivers with lower bit rate than 622 Mbps

ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Storage Temperature	T_{stg}	-40 ~ +85	$^\circ\text{C}$
Operating Temperature	T_{op}	-40 ~ +85	$^\circ\text{C}$
Supply Voltage ($V_{\text{CC}} - \text{GND}$)	5 V ¹	6	V
	3.3 V ²	4.5	
PD Bias Voltage (single output)	V_{PD}	25	V
Optical Input Power	P_{N}	2	mW

Note : 1. +5V supply voltage version.

2. +3.3V supply voltage version.

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{\text{op}} = 25^\circ\text{C}$)

Parameter		Symbol	Values			Unit	Conditions
			Min.	Typ.	Max.		
Detection Range		λ	1,100	-	1,650	nm	-
Optical Sensitivity ¹		S	- 33	- 31	- 29	dBm	$\lambda = 1.3 \mu\text{m}$
Optical Overload ¹		OL	- 3	0	-	dBm	$\lambda = 1.3 \mu\text{m}$
Bandwidth(-3dB) ¹		$f_{3\text{dB}}$	350	-	-	MHz	-
Gain (Differential output)		G	0.2	-	110	V/mW	-
Output Impedance		Z_{out}	-	50	-	Ω	-
AGC Time Constant		dR/dI	-	1	-	dB/ms	-
Supply Voltage	5 V	V_{CC}	4.5	5.0	5.5	V	-
	3.3 V		3.05	3.3	3.55		-
Supply Current	5 V	I_{CC}	-	32	50	mA	-
	3.3 V		-	30	40		-
Output Voltage	5 V	V_{ov}	-	-	1.2	V	-
	3.3 V		-	-	0.8		-
Output Bias Voltage	5 V	V_{OB}	1.5	2.5	3.5	V	-
	3.3 V		1.55	1.65	1.75		-

Note : 1. 622 Mbps, PRBS 2³¹-1, 10⁻¹⁰ BER.2. 50 Ω impedance matching condition.

PIN-TIA Receivers Ordering Information

LTxxx Series

ORDERING INFORMATION

LT	Bit Rate	Output Type	Supply Voltage	-	Fiber	Connector	Flange
	1	2	2	-	M	SP	1
Lightron PIN-TIA Receiver	1 : 155 Mbps 4 : 622 Mbps 8 : 1.25 Gbps	1 : Single output 2 : Differential output	1 : +3.3 V 2 : +5.0 V		R : Receptacle S : SMF pigtail M : MMF pigtail T : TO-46 can	NC : NO Connector SP : SC/PC FP : FC/PC TP : ST/PC SA : SC/APC FA : FC/APC BL : Ball lens	0 : No flange 1 : UM1 2 : UM2 3 : DM 4 : PM

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

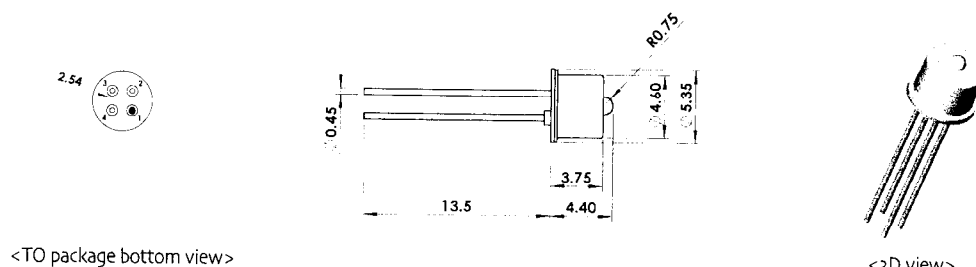
Example 1)LT122-MSP1 : Lightron 155 Mbps PIN-TIA receiver module with differential output, multi-mode fiber-pigtailed SC/PC connector, and up-screw mount flange.

2)LT422-MSP0 : Lightron 622 Mbps PIN-TIA receiver module with differential output, multi-mode fiber-pigtailed SC/PC connector, and no flange.

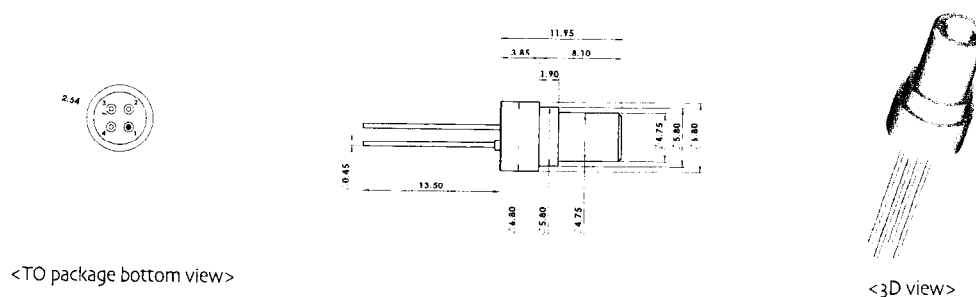
PACKAGE OUTLINE DIAGRAMS

Unit : [mm]

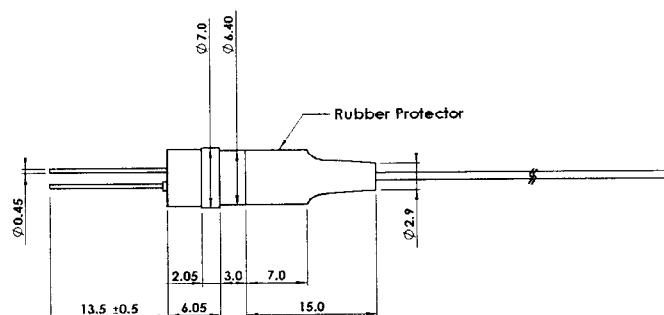
TO - can type <LTxxx-TBL0>



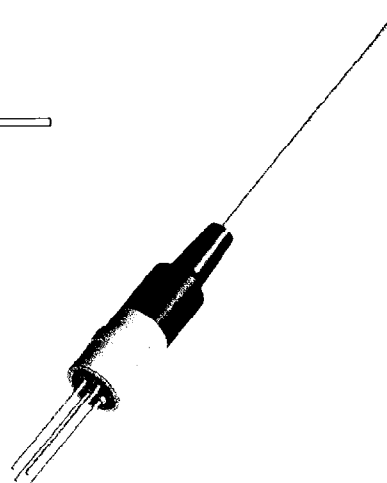
Receptacle type <LTxxx-RNC0>



Pigtail type with no flange <LTxxx-xxx0>

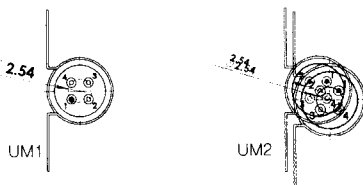
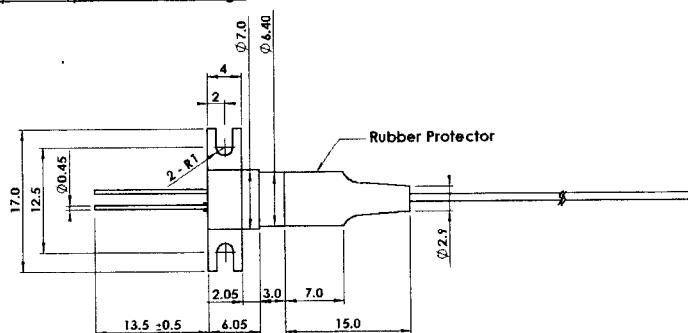


<TO package bottom view>

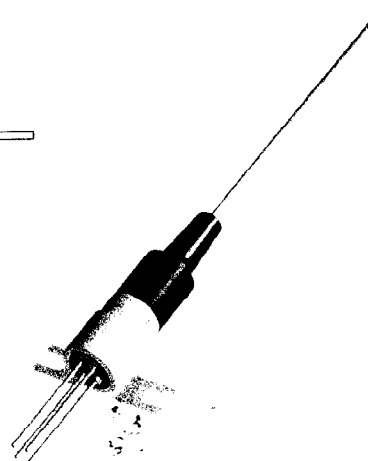


<3D view>

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



<TO package bottom view>

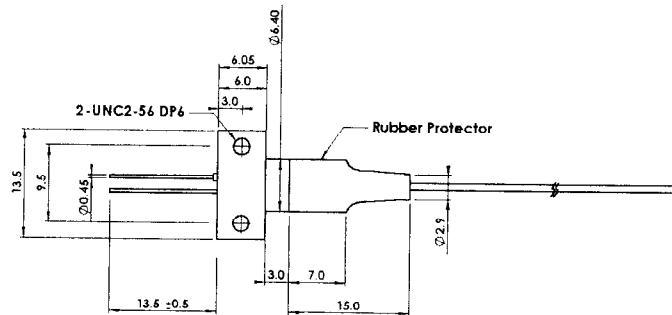


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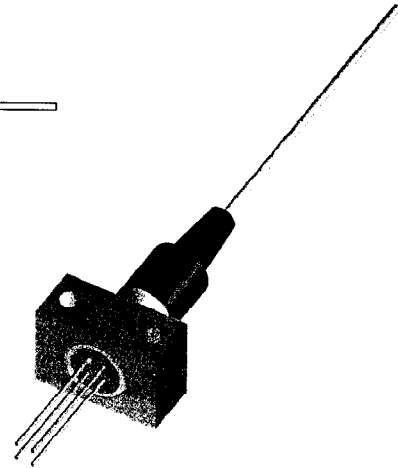
PIN-TIA Receivers Ordering Information

LTxxx Series

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

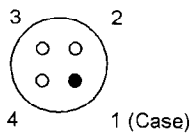


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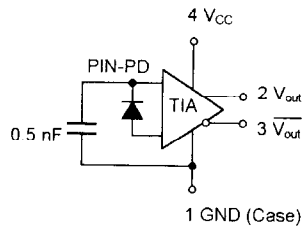


<3D view>

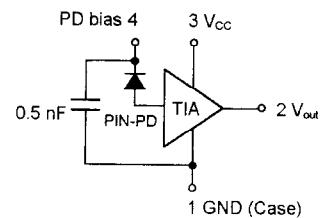
ELECTRICAL PIN CONFIGURATION



<TO package bottom view>



<Differential output>



<Single output>