JDS Uniphase

Product Bulletin

ETX 100
High Speed InGaAs Photodetector Receptacle Modules

Key Features

Electro-optical

- High responsivity at 1310 and 1550 nm
- Bandwidth greater than 1 GHz
- High sensitivity

Packaging

- Small surface area, LC receptacle for PC boards
- FC coaxial receptacle for panel mounts
- Direct-mating SC receptacle for PC boards or panel mounts

Applications

- Fiberoptics telecommunication networks
- Digital receivers
- Optical interconnects
- Test and measurement
- Datacom
- LAN

Specifications

Conditions (unless noted):
Temperature = 25°C, V_R = 5V

Parameter	Measurement Conditions	Min	Typ	Max	Units
Active Diameter			100		µm
Responsivity	λ = 1310 nm[1]	0.65	0.75		A/W
Responsivity	λ = 1550 nm[1]	0.70			A/W
Dark Current			0.30	1.0	nA
Capacitance[2]			1.1	1.25	pF
Bandwidth[3]			1.5		GHz
Rise Time[4]			250		ps

1. Measured with 50 µm, 0.2 N.A., graded index fiber.
2. Measured with case grounded.
3. -3 dB point into a 50 Ω load.
4. R_{LOAD} = 50Ω.

The ETX 100Rxx series are high speed receptacled photodiode modules designed primarily for use in optical communications applications in which high speed and reliability are critical. These modules feature bandwidths of at least 1 GHz and are designed for peak wavelength response at 1300 and 1550 nm. The connector receptacle designs permit mounting on PC boards or back planes. Each of the four modules making up the ETX 100Rxx series incorporates a 100 µm diameter InGaAs PIN photodiode mounted in an industry standard, precision connector receptacle which assures excellent mating repeatability. Standard receptacles available include LC, FC, and SC. These modules will accept either Single Mode or Multi Mode connectorized fiber.

The ETX 100 RLC is mounted in an LC receptacle and is designed primarily to provide a high performance package for telecommunication and datacom applications with reduced surface density and easier mounting procedures. This next generation small form factor (The LC receptacle is respectively, 52% and 34%, smaller in packaging surface density than the FC and SC receptacles) is half the footprint required for LAN interfaces, thereby reducing costs and increasing packing density. Like the RSC, the ETX 100 RLC mates directly with the connector and does not require fastening of the connector to assure mating.

All receptacled detector modules are qualified to Telecordia and MIL standards.

Maximum Ratings

Parameter	Min	Typ	Max	Units
Forward Current[1]			10	mA
Reverse Current[2]			10	mA
Reverse Voltage			25	V
Operating Case Temperature	-40		85	°C
Storage Temperature	-40		85	°C

1. Under forward bias, current at which device may be damaged.
2. Under reverse bias, current at which device may be damaged.

Ordering Information

Indicate your requirements by selecting one option from each configuration table. Please print the corresponding codes in the available boxes to form your part number. For more information on this or other products and their availability, please contact your local JDS Uniphase sales representative or JDS Uniphase directly at 877-550-JDSU or visit our Web site at www.jdsuniphase.com.

Sample: ETX 100 RLC

ETX 100 + □

code	package
RLC	LC receptacle
RFC2	FC receptacle with 2-hole flange
RSC-DM	SC receptacle, dual-mount (panel & board)
RSC-FM	SC receptacle, front-mount (panel only)

Figure 1

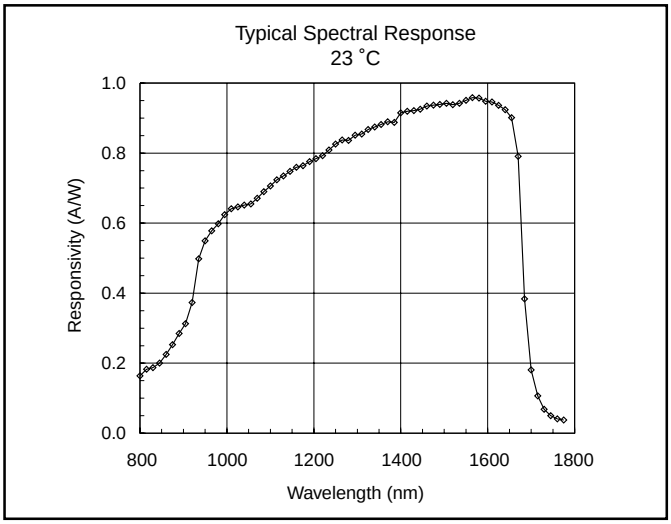


Figure 2

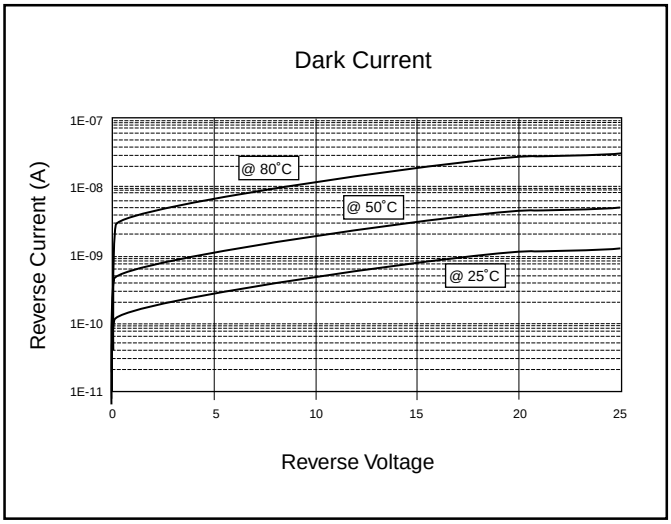


Figure 3

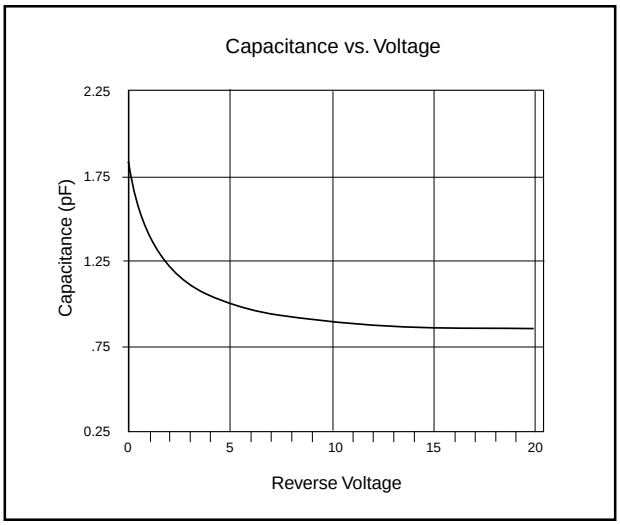
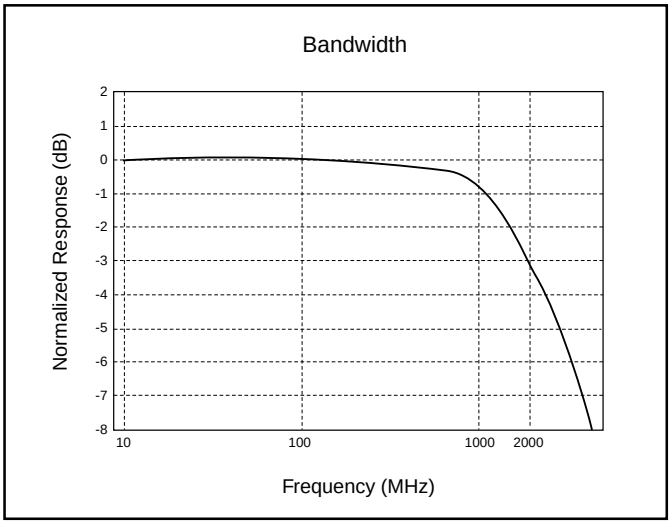


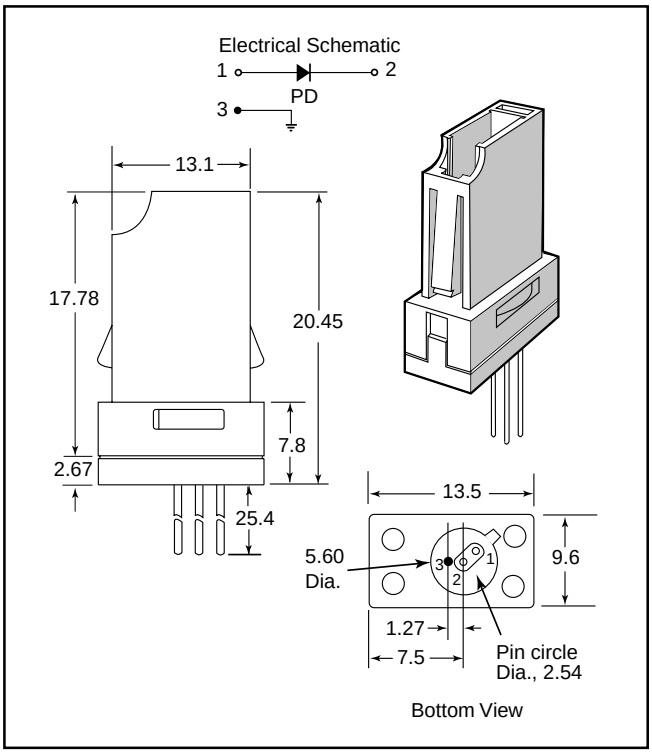
Figure 4



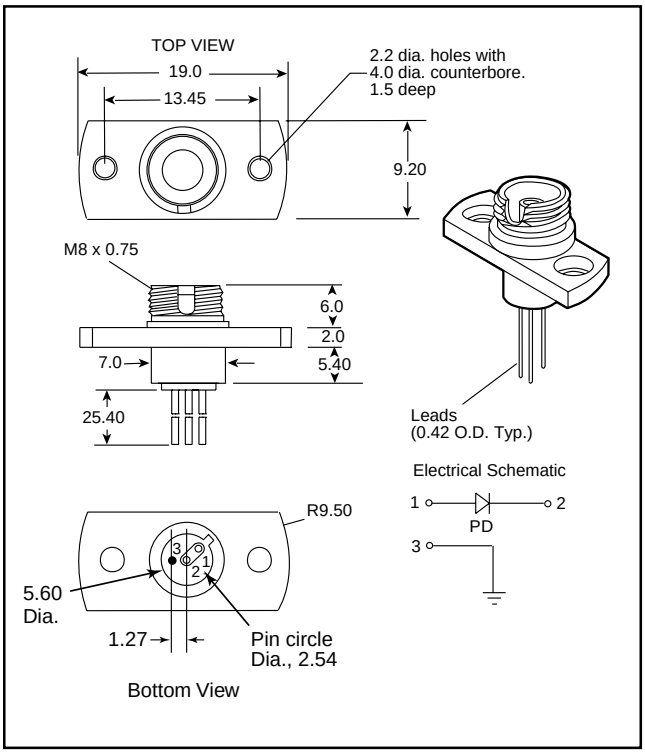
Mechanical Dimensions

All dimensions in mm (nominal)

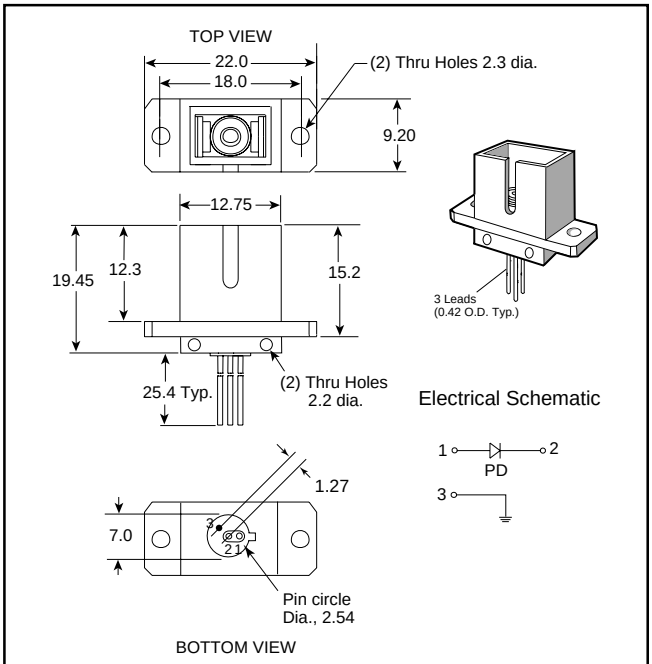
ETX 100RLC



ETX 100RFC2

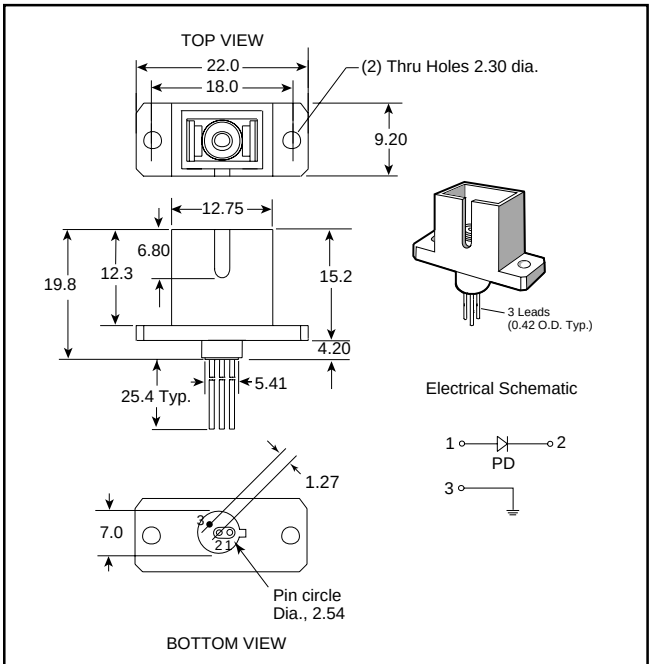


ETX 100RSC-DM



Note: Critical dimensions meet NTT specifications. Other dimensions subject to revision.

ETX 100RSC-FM



Note: Critical dimensions meet NTT specifications. Other dimensions subject to revision.

Precautions for Use

ESD protection is imperative. Use of grounding straps, anti-static mats, and other standard ESD protective equipment is required when handling or testing an InGaAs PIN or any other junction photodiode. Fiber pigtails should be handled with less than 10 N pull and with bending radius greater than 1″. Soldering temperature of the leads should not exceed 260 °C for more than 10 seconds.

Quality Vision

We have a leadership position in the optoelectronic industry with a vision for excellence in quality. The company is committed to providing customers with the highest levels of quality and reliability in design and manufacturing. Quality Management Systems are certified to ISO 9000 standards, prioritizing continuous improvement and total customer satisfaction. Strict quality controls are maintained to ensure that all products meet or surpass customer requirements.

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