

## 155Mb/s PECL 单模双纤光收发一体模块

### 155Mb/s PECL SINGLE MODE DUPLEX FIBERS OPTICAL TRANSCEIVER

#### 特点:

- SC/FC/ST 或尾纤型光接口，单模双纤光收发一体模块
- +3.3V /+5V 供电
- 接口电平兼容标准 PECL 电平
- 标准 1×9 管脚封装，引脚配置与 Multisource 协议兼容
- 发射器件可选用 1310nm 的 FP 激光器或 1550 DFB 激光器
- 接收采用平面结构 InGaAsP PIN 探测器



#### Features:

- SC/FC/ST receptacle optical interface and pigtail optical interface
- Single mode Duplex fibers optical transceiver
- +3.3V /+5V Power Supply
- Standard PECL data output with signal detect indication
- Multi-sourced 1×9 package
- High quality 1310nm MQW-FP LD/ 1550nm DFB LD
- Receiver has a planar InGaAsP PIN

#### 应用:

- 155Mb/s 及以下速率的光纤传输系统，如 SDH 系统、数字视频光端机等。

#### Applications

- Applied to optical fiber transmission systems, such as SDH and digital video optical terminal devices with bit rate up to 155Mbps

#### 技术指标: Specifications

参数 Parameter	条件 Condition	最小 Min	典型 Typ	最大 Max
工作波长 (nm) Wavelength	1310	1260	1310	1360
	1550	1540	1550	1560
电源电压 (V) Power Supply	Vcc	3.135	3.3	3.465
		4.75	5	5.25
信号电平 Signal Level	PECL		3.2~4.0	
	LVPECL		1.5~2.3	
输出谱宽 (nm) Output Spectral Width	FP-LD,RMS			4
	DFB-LD,-20dB			1
消光比(dB)Extinction Ratio	EX	10		
最小过载点 (dBm) Overload	BER=1×10 <sup>-10</sup>	-3		
发送电流 (mA) Current of transmitter section	Vcc=5V			100
	Vcc=3.3V			100
接收电流 (mA) Current of receiver section	Vcc=5V			110
	Vcc=3.3V			110

## 速率、激光器、模式及波长、发射功率、灵敏度与传输距离

### Data Rate, LD, Wavelength and Mode, Po, Sen, Reach

速率 Data rate	激光器 LD	模式及波长 Wavelength and Mode	输出平均光功率 Po (dBm)	灵敏度 Sen (dBm)	传输距离 Reach
155Mb/s	1310nm FP	SM 1310nm	≥-14dBm	≤-33dBm	20km
155Mb/s	1310nm FP	SM 1310nm	≥-11dBm	≤-33dBm	40km
155M b/s	1310nm FP	SM 1310nm	≥-5dBm	≤-35dBm	60km
155Mb/s	1550nm DFB	SM 1310nm	≥-8dBm	≤-36dBm	80km
155Mb/s	1550nm DFB	SM 1310nm	≥-3dBm	≤-36dBm	100km
155M b/s	1550nm DFB	SM 1310nm	≥-1dBm	≤-37dBm	120km

### 极限值 Absolute Maximum Ratings

工作温度 (°C) Operating temperature (°C)	0 ~ +70 (商业级) Commercial Level -40 ~ +85 (工业级) Industrial Level	引线焊接温度 (°C) Lead soldering temperature (°C)	<260
储存温度 (°C) Storage temperature (°C)	-40 ~ +85	引线焊接时间 (Sec) Soldering duration (Sec)	<10

## 光模块管脚定义

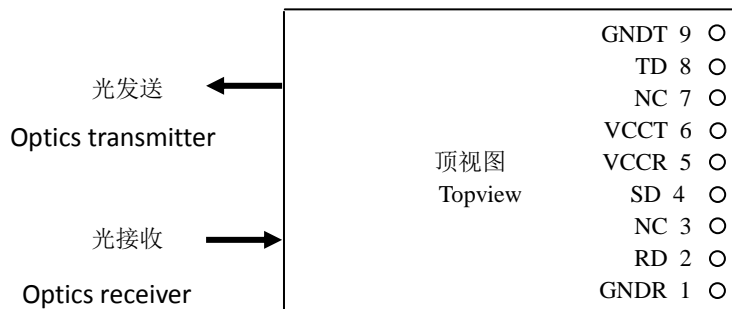
Pin definitions for transceiver

管脚 Pin	管脚名称 Name	电 平 Level	说 明 Description
1	GNDR		接收部分接地脚 Signal ground for Receiver
2	RD+	PECL/LVPECL	接收部分数据输出 Data output of receiver section
3	RD-	PECL/LVPECL	接收部分反向数据输出 Reverse data output of receiver section
4	SD* SD-T**	PECL/LVPECL TTL	接收部分无光告警。 Signal Detect. Customers have options for PECL or TTL SD.
5	VccR		接收部分正电源 Power supply for receiver
6	VccT		发送部分正电源 Power supply for transmitter
7	TD-	PECL/LVPECL	发送部分反向数据输入 Reverse Data input of transmitter section
8	TD+	PECL/LVPECL	发送部分数据输入 Data input of transmitter section
9	GNDT		发送部分接地脚 Signal ground for Transmitter

**SD\* : Default Signal Detect. PECL mode.**

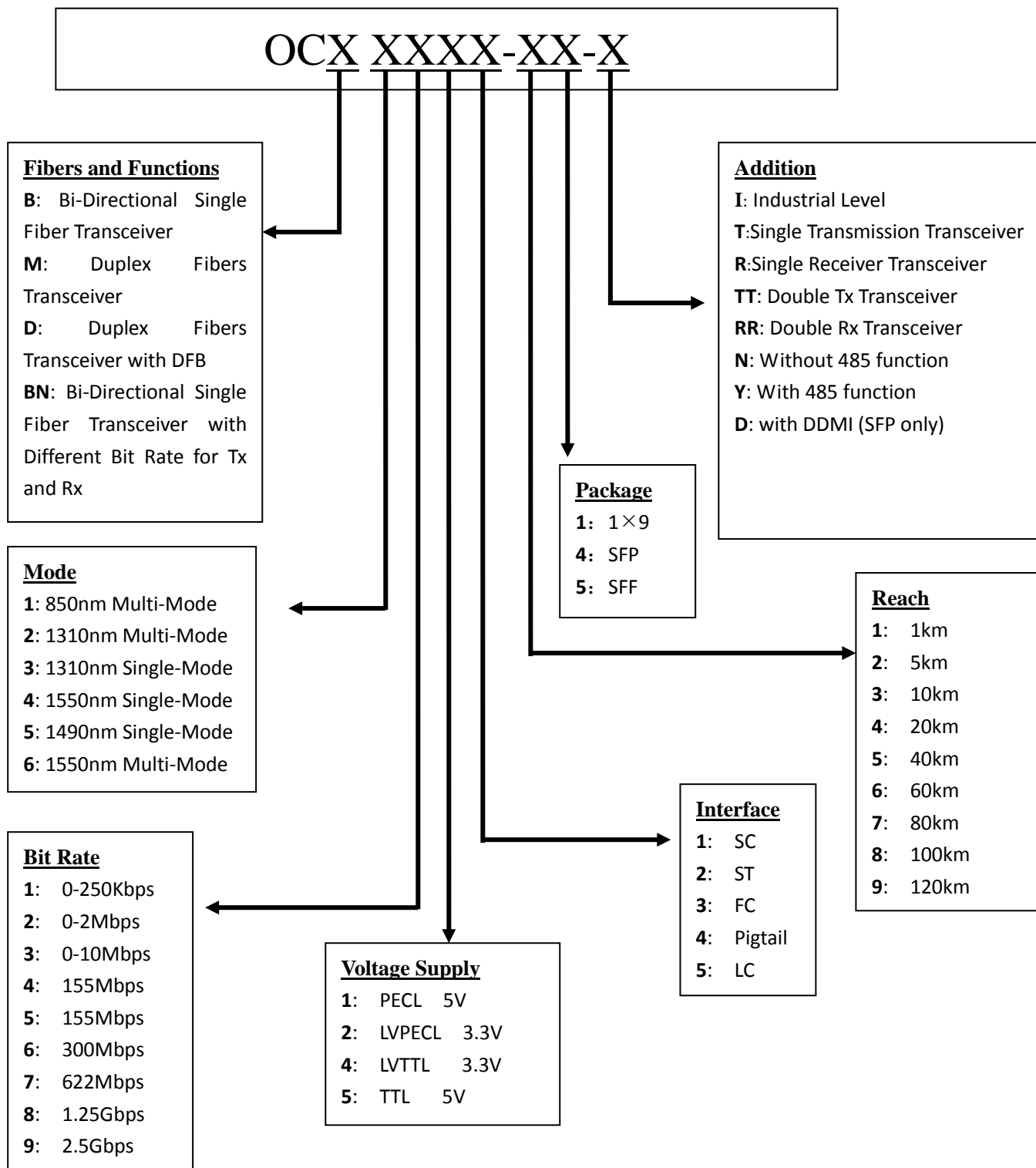
**SD-T\*\*: Optional Signal Detect. Compatible with TTL SD .**

## 顶视图 Topview



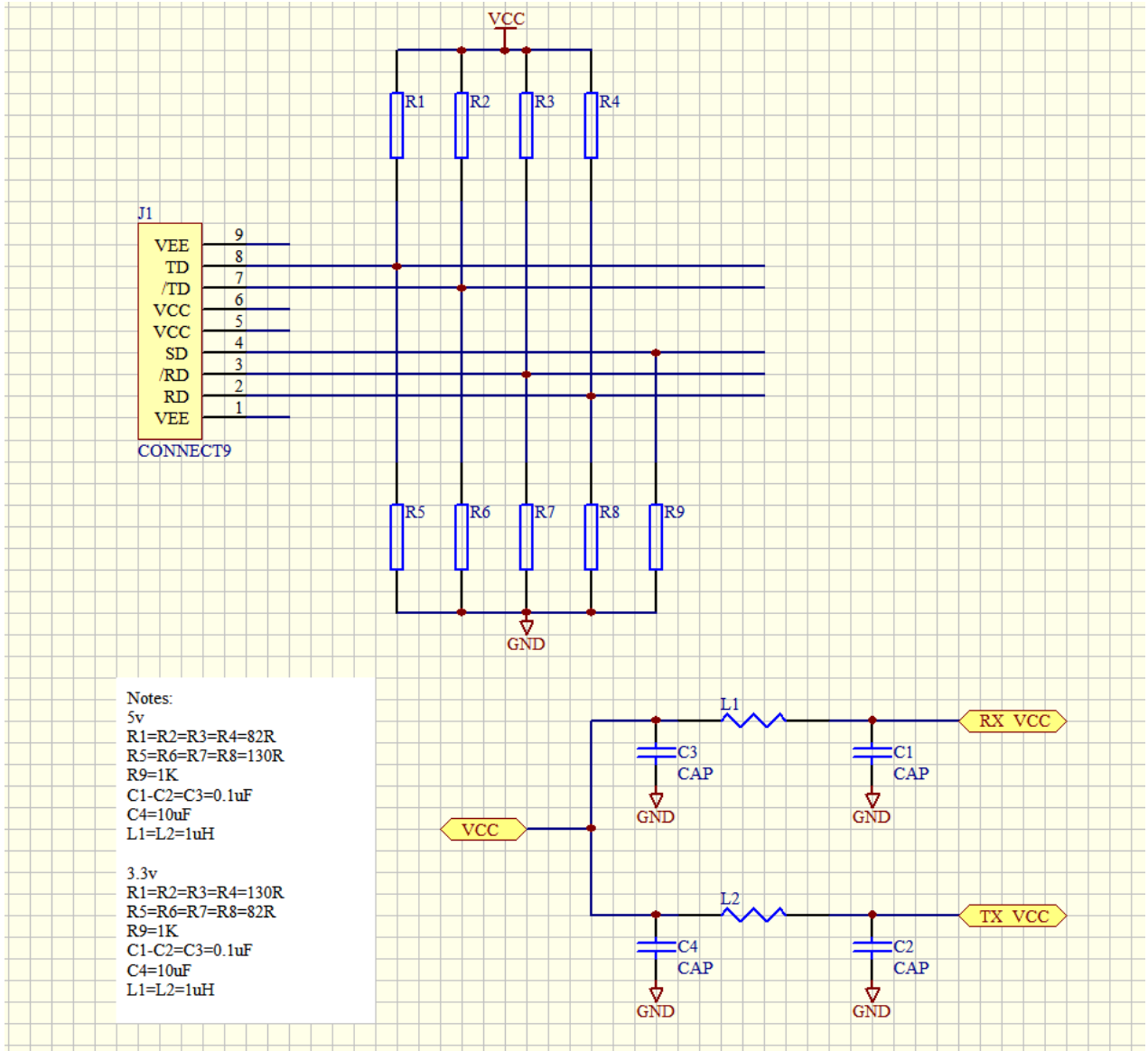
## 订购信息

### Order Information



外围电路推荐:

Recommended Application Configuration:

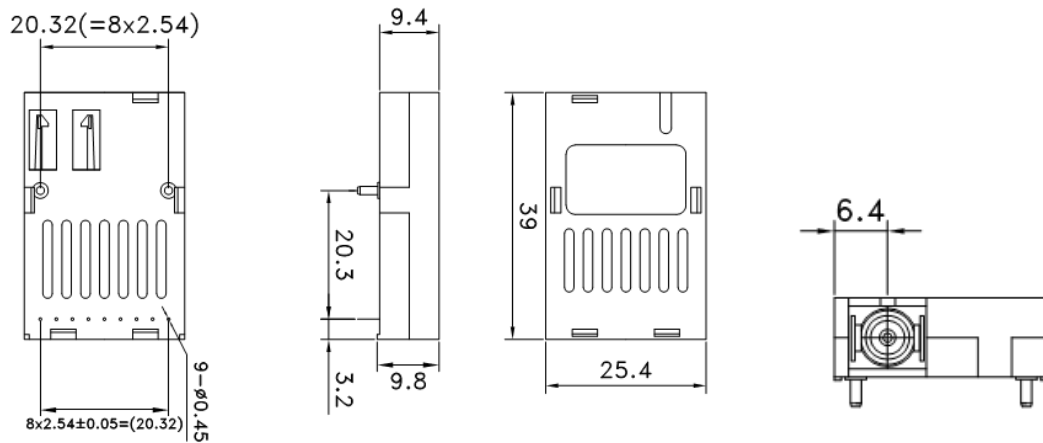


## 外形尺寸及接口定义

### Dimension and optical interface

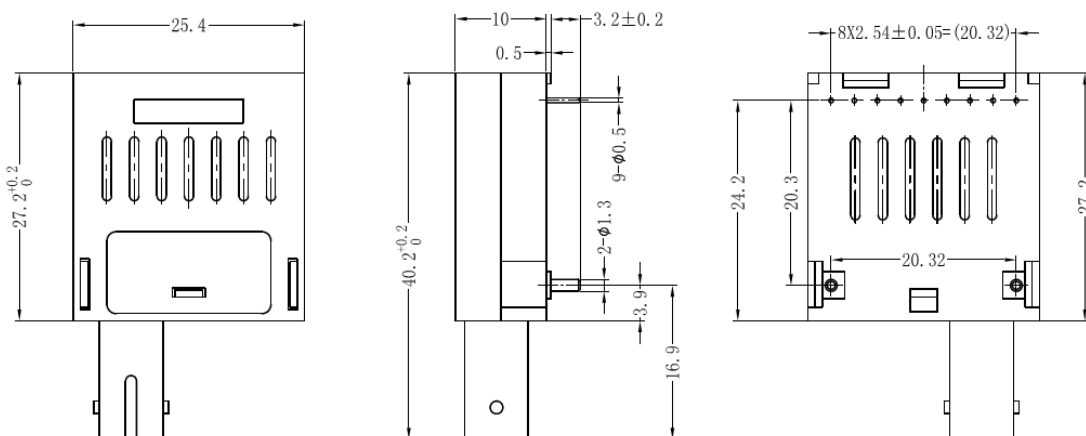
BIDI 边开口 SC 型接口:

BIDI SC optical interface on the edge:



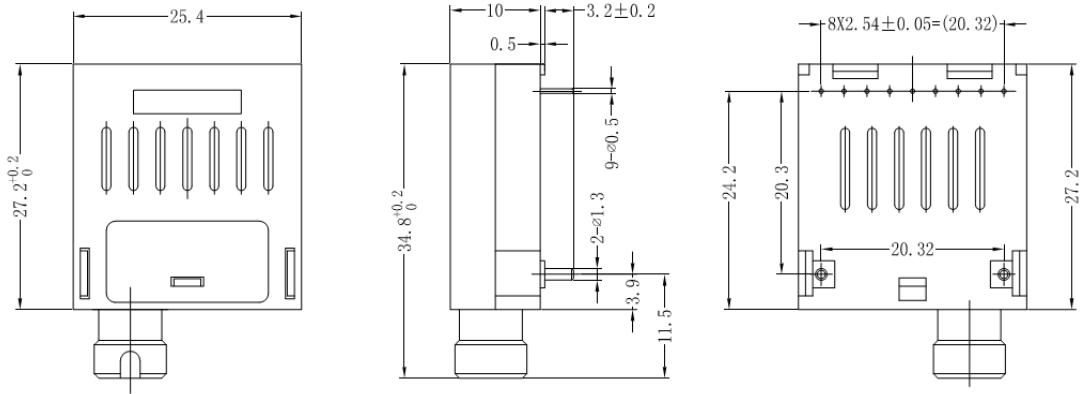
BIDI 边开口 ST 型接口

BIDI ST optical interface on the edge:



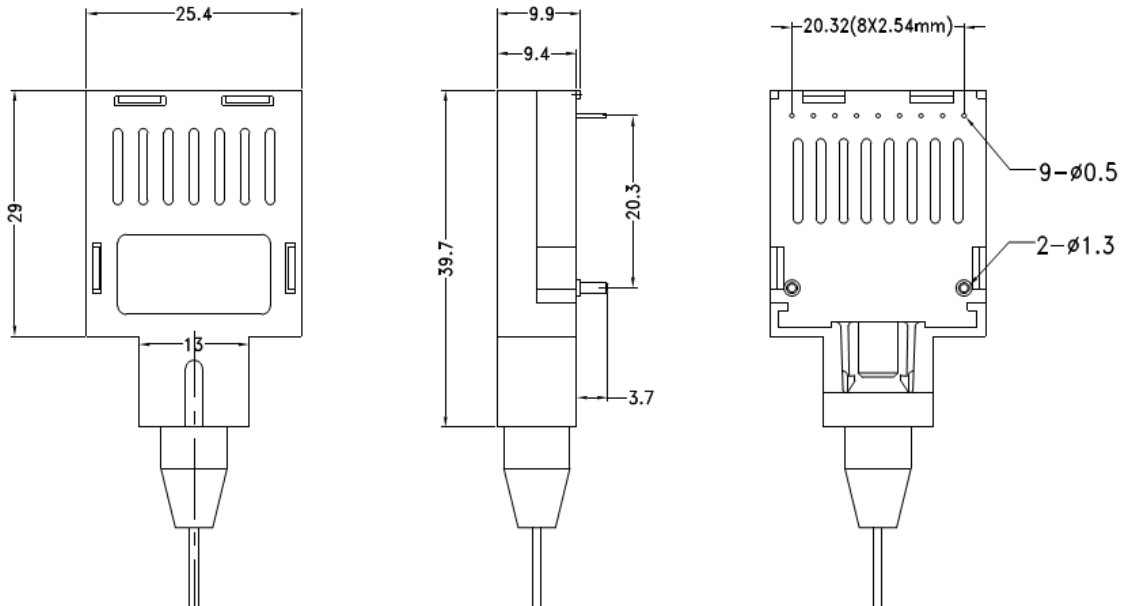
## BIDI 边开口 FC 型接口

BIDI FC optical interface on the edge:

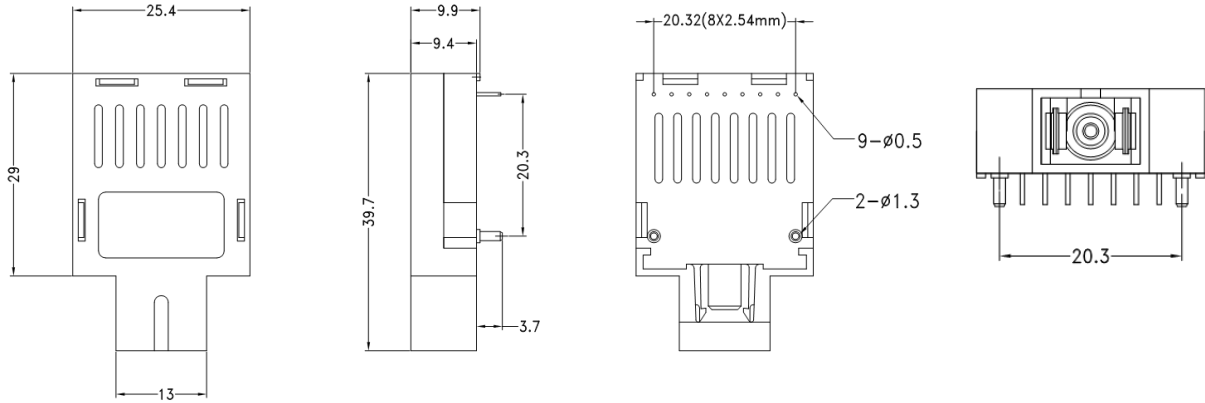


## BIDI 尾纤型接口

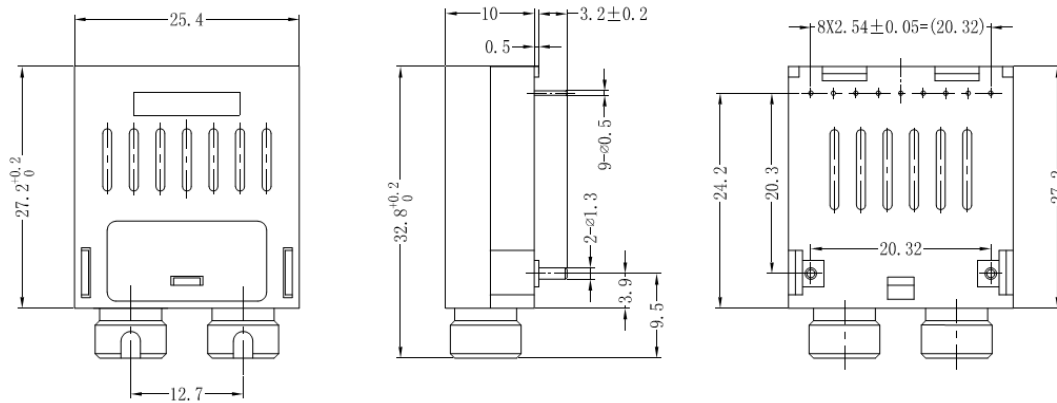
BIDI pigtail optical interface in the middle



**BIDI 中开口 SC 型接口**  
BIDI SC optical interface in the middle



**双纤 FC 型接口**  
Duplex FC optical interface



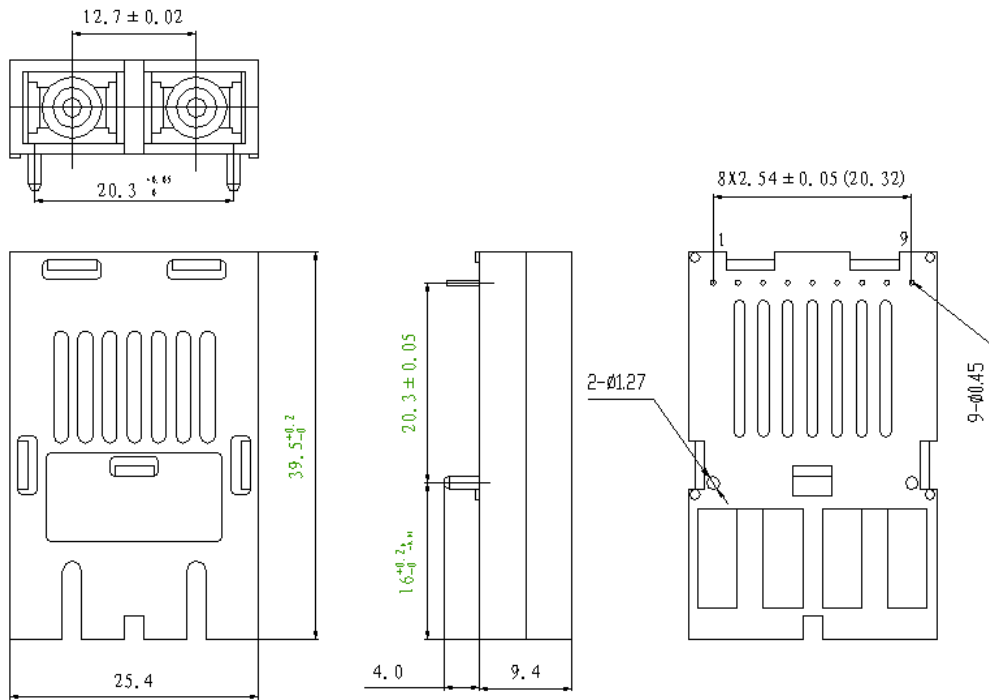
顶视图 Top view

底视图 Bottom view



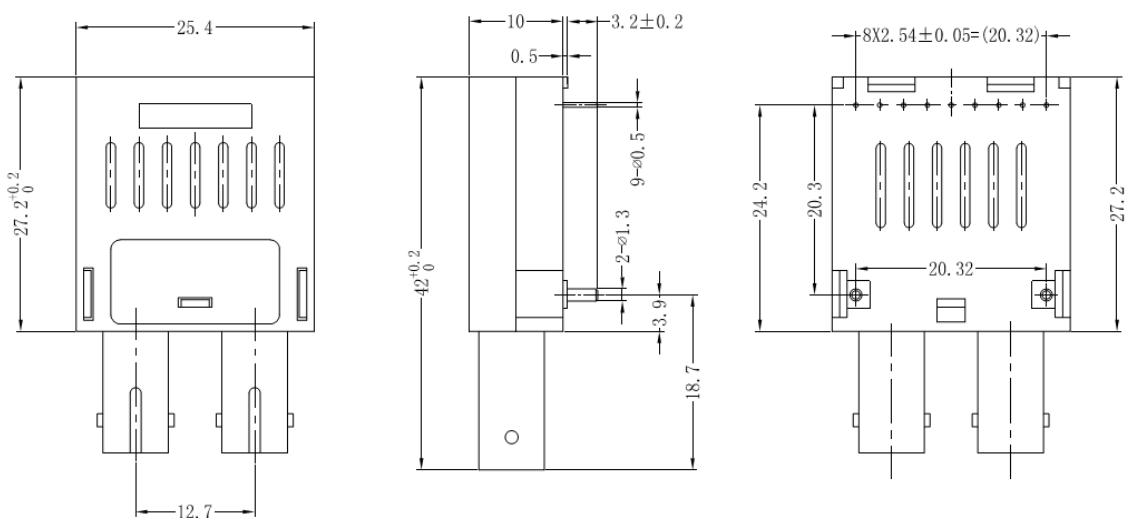
## 双纤 SC 型接口

### Duplex SC optical interface



## 双纤 ST 型接口

### Duplex ST optical interface



## 双纤尾纤型接口

### Duplex pigtail optical interface

