E1B35/45(53/54)12-xxD

1.25Gb/s Pecl Single Mode Bi-Directional Single Fibers Optical Transceiver

PRODUCT FEATURES

- **SC/FC/ST receptacle optical interface**
- **Standard 1×9 package，and the pin configuration is compatible with the Multisource Agreement**
- **+3.3V Power Supply**
- **Standard PECL data output with signal detect indication**
- **Transmitter section Selects 1310nm FP \1550nmDFB LD or 1490nm DFB\1550nm DFB**

APPLICATIONS

- **Applied to optical fiber transmission systems such as SDH and digital video optical terminal devices with bit rate up to 1.25Gbps**

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Ordering Information

Part No.	Data Rate(optical)	Laser	Fiber Type	Distance	Temp
E1B3512-20D	1.25Gb/s	FP	SMF	20km	0~70℃
E1B5312-20D	1.25Gb/s	DFB	SMF	20km	0~70℃
E1B3512-40D	1.25Gb/s	FP	SMF	40km	0~70℃
E1B5312-40D	1.25Gb/s	DFB	SMF	40km	0~70℃
E1B4512-60D	1.25Gb/s	DFB	SMF	60km	0~70℃
E1B5412-60D	1.25Gb/s	DFB	SMF	60km	0~70℃
E1B4512-80D	1.25Gb/s	DFB	SMF	80km	0~70℃
E1B5412-80D	1.25Gb/s	DFB	SMF	80km	0~70℃
E1B4512-A0D	1.25Gb/s	DFB	SMF	100km	0~70℃
E1B5412-A0D	1.25Gb/s	DFB	SMF	100km	0~70℃

Specifications

Parameter	Condition	Min	Typical	Max	Unit
Wavelength	1310	1270	1310	1350	
	1490	1480	1490	1500	nm
	1550	1530	1550	1570	
Data Rate	A/B	-	1.25	-	Gb/s
Signal Level	LVPECL	-	1.5~2.3	-	-
Absolute Maximum Ratings					
Storage Temperature	-	-40	-	+85	℃
Operating Temperature	Commercial	0	-	+70	℃
	Industrial	-40	-	+85	℃
Soldering Temperature	-	-	-	260	℃
Soldering Time	-	-	-	10	S
Power Supply	Vcc	3.135	3.3	3.465	V
Output Spectral Width	FP-LD,RMS	-	4	-	nm
	DFB-LD,-20dB	-	-	1	nm
Extinction Ratio	EX	10	-	-	dB
Current of transmitter section	Vcc=3.3V	-	-	150	mA
Current of receiver section	Vcc=3.3V	-	-	100	mA

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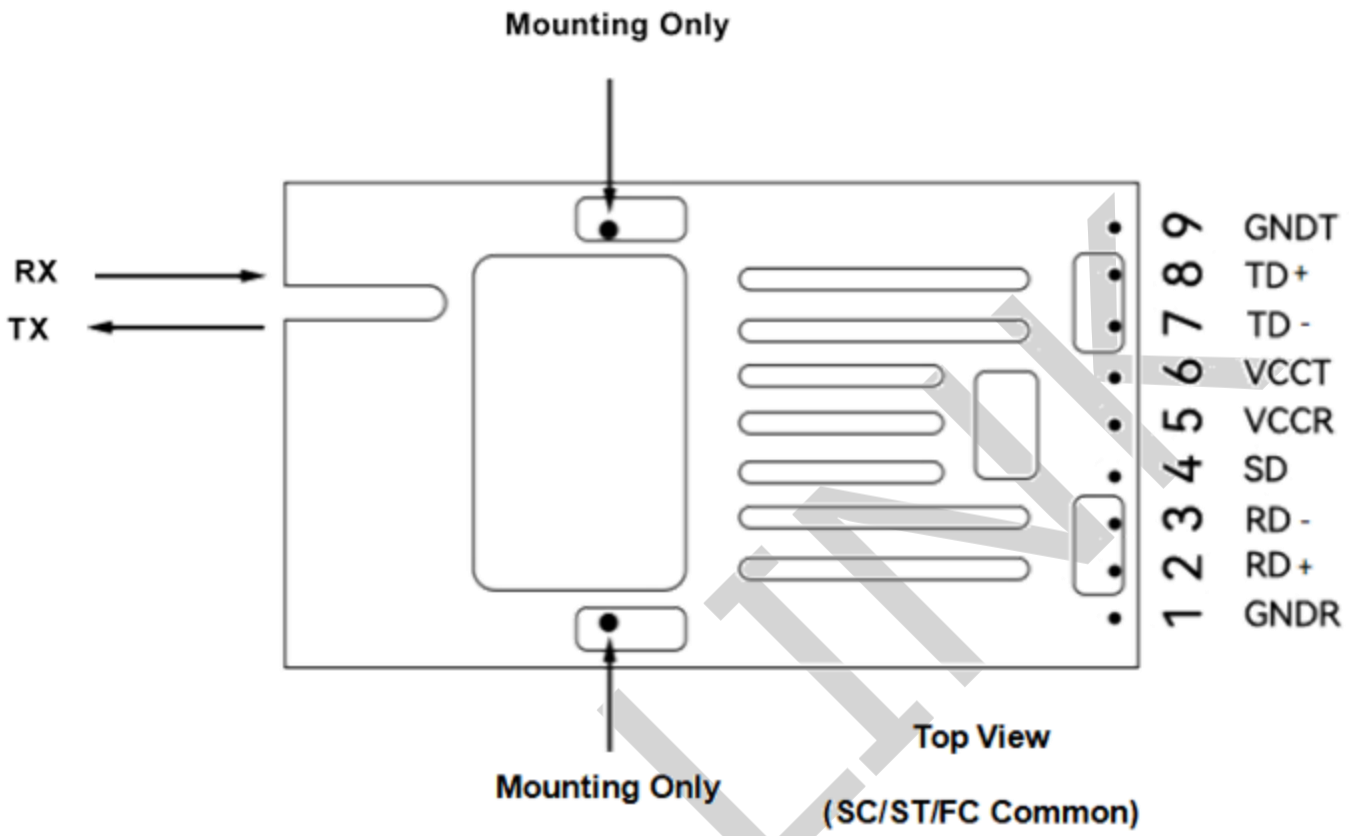
Pin Diagram

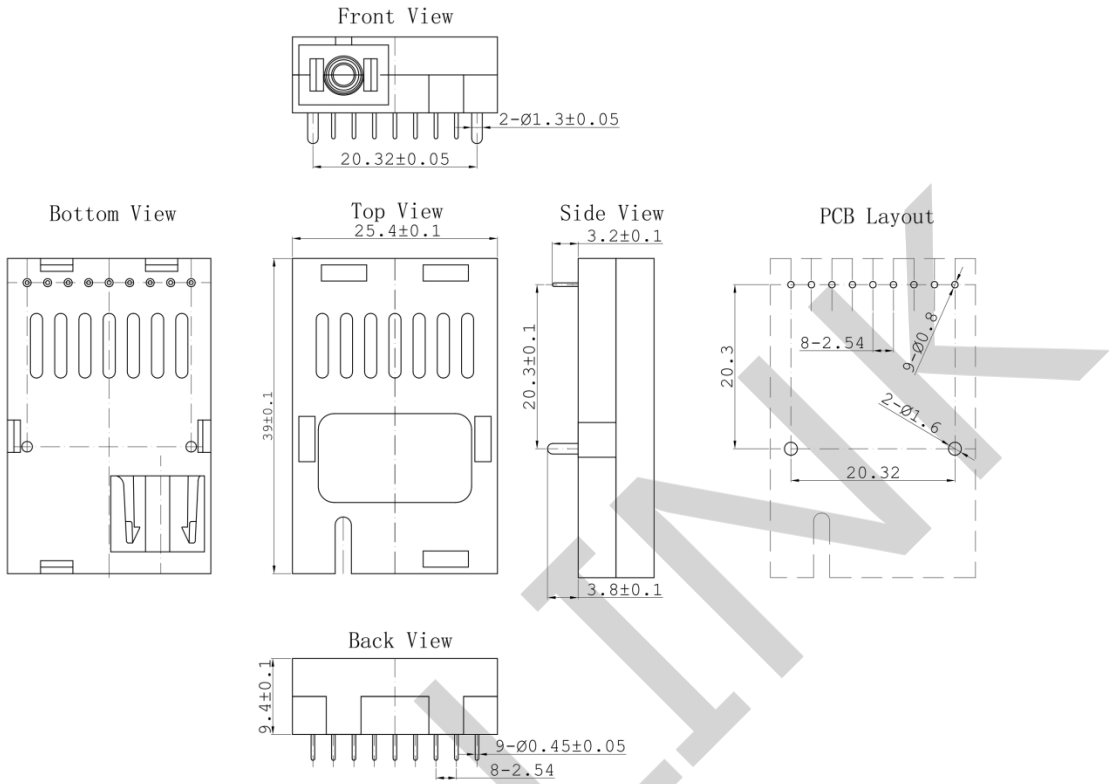


Pin Definitions

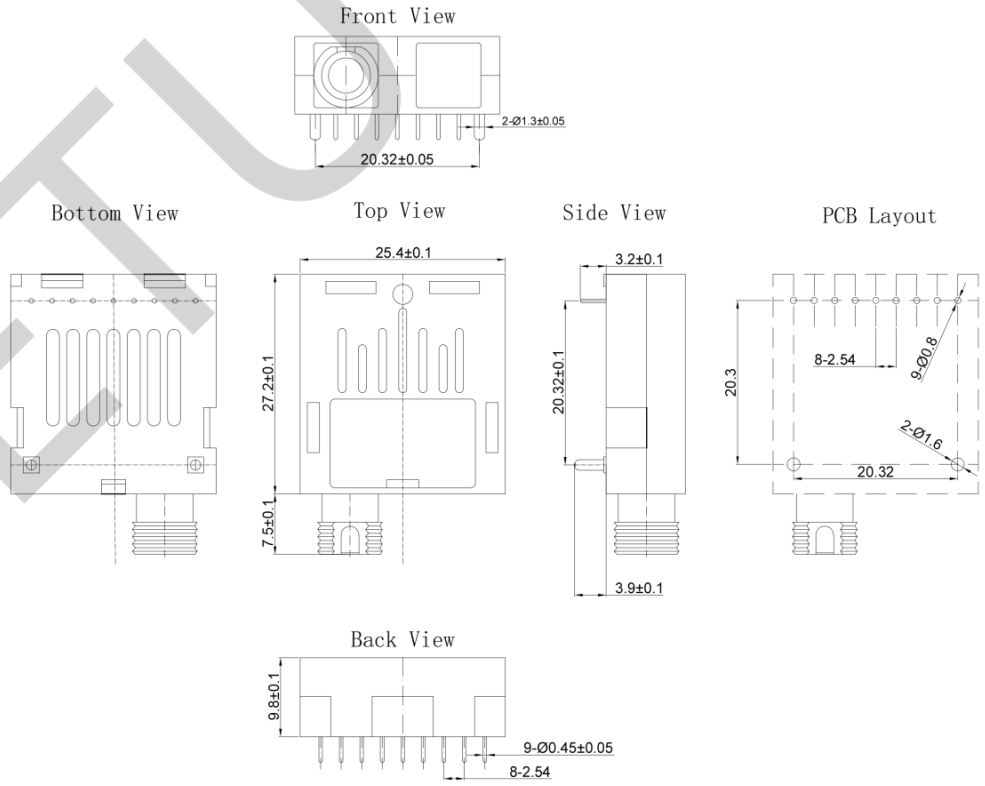
Pin	Name	Logic Level	Description
1	VEER		Signal ground for Receive
2	RD+	LVPECL	RX Output Data
3	RD-	LVPECL	RX Output Invert Data
4	SD	LVPECL	Signal Detect is a PECL output .A high level indicates a received optical signal
5	VCCR		Power supplyfor receiver
6	VCCT		Power supplyfor transmitter
7	TD-	LVPECL	TX Invert Data Input
8	TD+	LVPECL	TX Data Input
9	VEET		Signal ground for Transmitter

Dimension and optical interface

BIDI SC optical interface



BIDI FC optical interface



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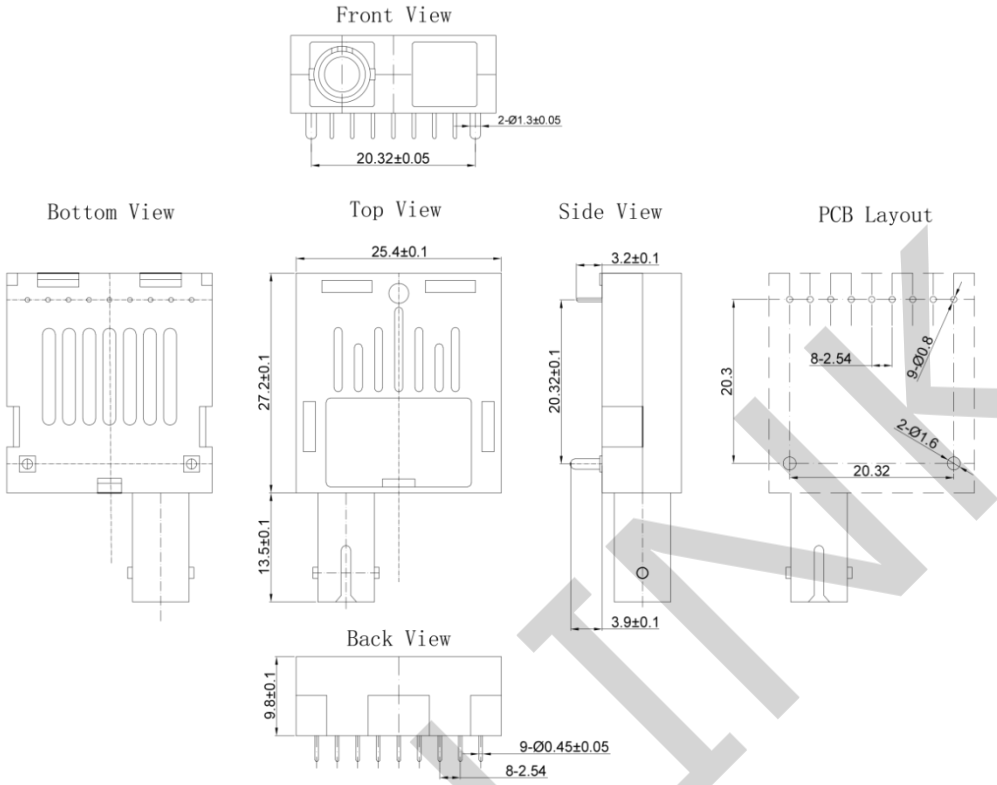
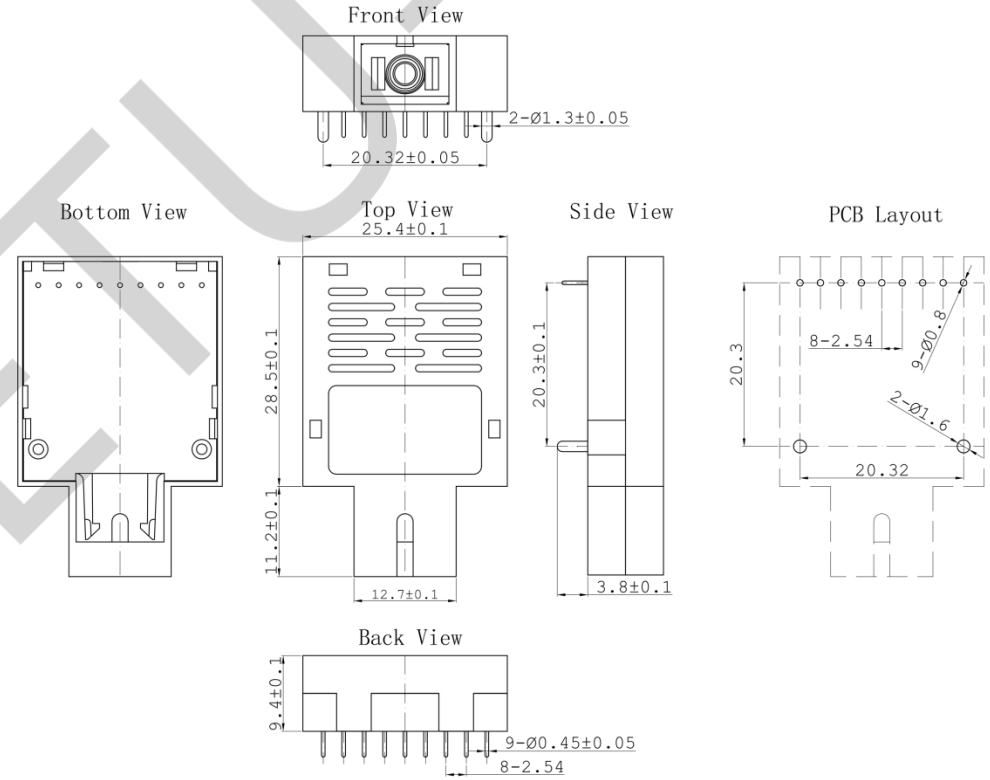
BIDI ST optical interface



BIDI SC optical interface in the middle



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Revision History

Version No.	Date	Description
1.0	February 18, 2015	Preliminary datasheet
2.0	September 28,2024	Product upgrades
2.1	Apr 04,2026	Update product model

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