

Laser diode

L8231/L7551 series

Receptacle type, 1.3 μm , 1.25, 2.5 Gbps



L8231 and L7551 series are high-speed infrared emitters specifically developed for 1.3 μm band optical fiber communications. These devices incorporate a high-speed Fabry-Perot laser diode integrated in a receptacle module. Packages are available with various connectors and mounting styles.

Features

- High-speed Fabry-Perot laser diode
L8231 series: 1.25 Gbps
L7551 series: 2.5 Gbps
- Compatible with single/multi mode optical fibers

Applications

- Optical fiber communications
- Fiber channel
- Gigabit ethernet
- HDTV
- SDH

■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	L8231 series	L7551 series	Unit
Forward current	IF	Ith + 14 (DC)	Ith + 16 (DC)	mA
		Ith + 28 (pulse) *1	Ith + 32 (pulse) *1	mA
Reverse voltage (laser diode)	VR	2		V
Reverse voltage (photodiode)	VRM	20		V
Operating temperature	Topr	-20 to +70		°C
Storage temperature	Tstg	-40 to +70		°C

*1: Duty ratio 50 %

■ Electrical and optical characteristics (Typ. Ta=25 °C, IF=Ith +10 mA)

Parameter	Symbol	L8231 series	L7551 series	Unit
Peak wavelength	λ_p	1.31	1.31	μm
Forward voltage	VF	1.1	1.1	V
Threshold current	Ith	6	9	mA
Fiber end output *2	PF	0.2	0.2	mW
Rise time	tr	250	200	ps
Data rate	B	1.25	2.5	Gbps
Monitor current (photodiode)	Im	0.4	0.5	mA

*2: Measured using a single-mode optical fiber (mode field diameter 9.5 μm) with a master plug.

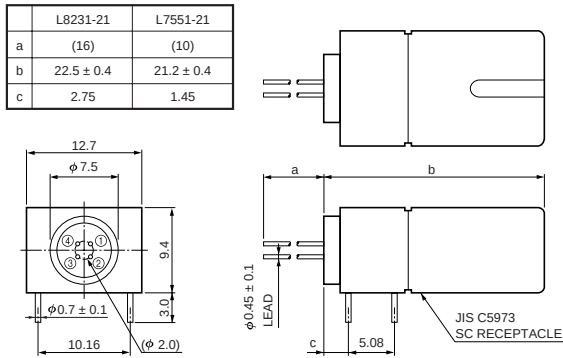
■ Package lineup

Parameter	L8231/L7551				
	-21	-22	-23	-32	-44
Mounting style	Board			Panel	Board & panel
Connector	SC	FC	MU	FC	LC
Dimensional outline	①	②	③	④	⑤

Laser diode L8231/L7551 series

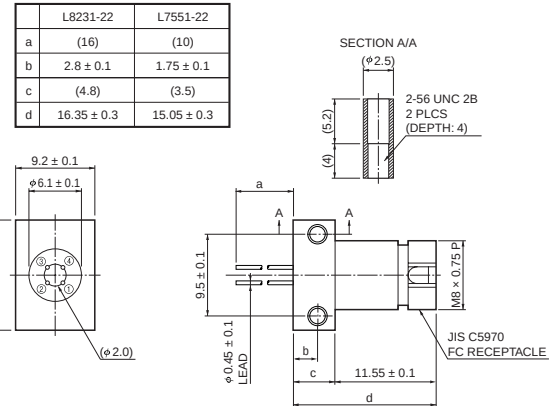
■ Dimensional outlines (unit: mm, tolerance unless otherwise noted: ± 0.2)

① L8231/L7551-21



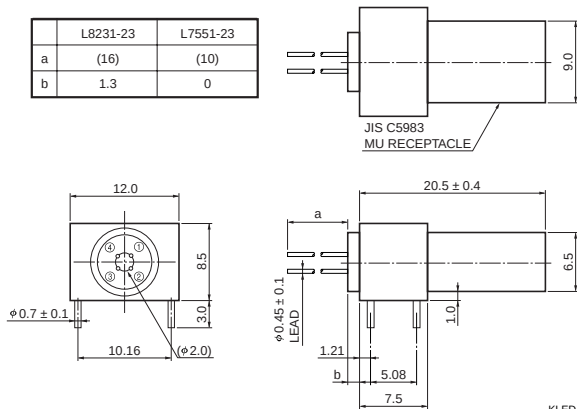
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② L8231/L7551-22



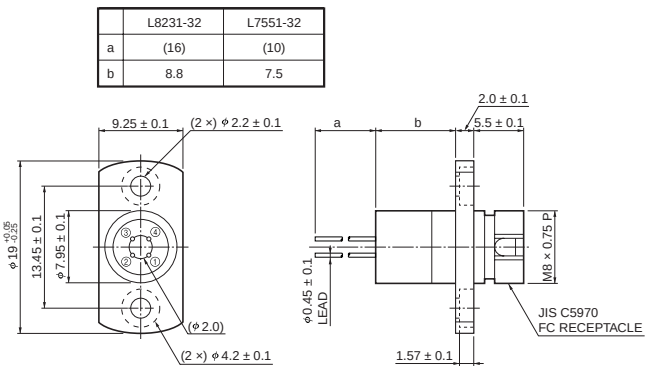
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③ L8231/L7551-23



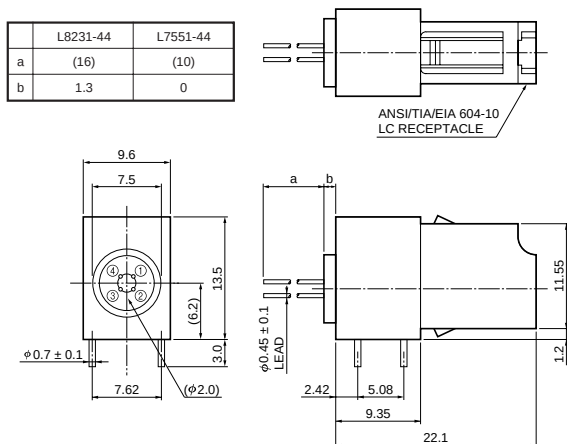
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④ L8231/L7551-32



KLEDA0036EB

⑤ L8231/L7551-44



KLEDA0046EB

■ Pin connection

Pin No.	L8231 series	L7551 series
①	Anode (PD)	Cathode (PD)
②	Anode (LD)	Cathode (LD)
③	Cathode (LD)	Anode (LD)
④	Cathode (PD)	Anode (PD)

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