

KLT-131451S

Rev. 006

Description

KLT-131451x is long wavelength Fabry-Perot LD source in TO-56 package with ball lens cap.

KLT-131451x consists of an InGaAsP strained multi-quantum well(MQW) laser diode(LD) and an InGaAs PIN-PD for output monitoring. It at 1310 nm wavelength band and with data rate of 1.25Gbps.

It is suitable for fabricating pigtailed LD source, TOSA(transmitter optical sub assembly), and bi-directional module.

FEATURES

- High performance strained MQW InGaAsP LD with BH(buried hetero-junction) structure
- Hermetically sealed TO-56 package with Ø1.5mm ball lens cap
- High reliability and environmental endurance
- Operating wavelength of 1.3µm band
- Wide operating temperature range from -40 °C to 85 °C
- Data rates of 1.25Gbps

APPLICATIONS

- SONET OC-1~ OC-48/SDH STM-1 ~ STM-16
- 155Mbps, 622Mbps, and 1.25Gbps for ATM and Ethernet
- Suitable for fabrication of coaxial LD module, TOSA, and Bi-Di module

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	unit
Operating temperature	T _{op}	-40	85	°C
Storage temperature	T _{stg}	-40	100	°C
Peak laser output power	P _o		8	mW
Peak reverse laser voltage	V _{rl}		2	V
Peak forward monitor PD current	I _{fp}		2	mA
Peak reverse monitor PD voltage	V _{rp}		20	V

Optical and Electrical Characteristics (KLT-131451x Top = 25 °C otherwise specified)

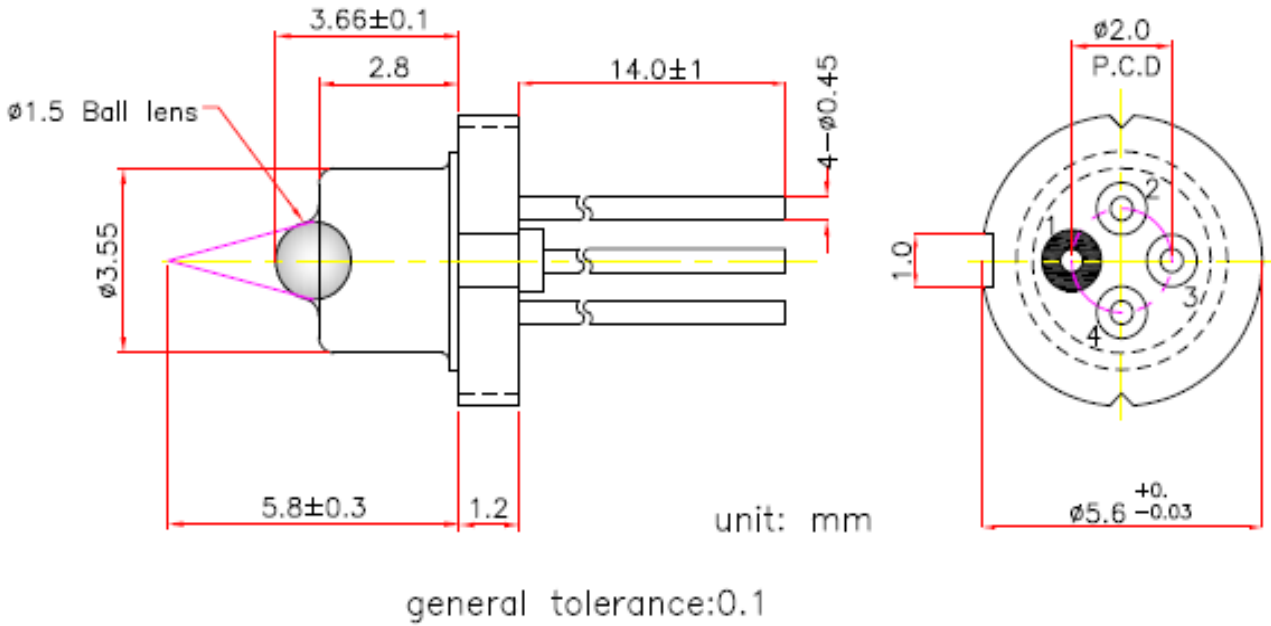
Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Operating temperature	T _{op}	-40		85	°C	
Threshold current	I _{th}	4	8	15	mA	CW, kink free
Operating current	I _{op}		23	35		CW, Po=5mW
Slope efficiency	η	0.2	0.3			CW, Po=5mW
Operating voltage	V _{op}		1.1	1.5	V	at rated Po=5mW
Center wavelength	λ _c	1290	1310	1330	nm	at rated Po=5mW
RMS spectral width	Δλ		1	2	nm	at rated Po=5mW
Optical rise and fall time	t _r		0.1	0.2	ns	20 to 80 %, I _b = I _{th} , Po=5mW
	t _f		0.1	0.2	ns	80 to 20 %, I _b = I _{th} , Po=5mW
Monitor PD current	I _m	0.05			mA	at rated Po=5mW, V _{rp} = 1V
Monitor PD dark current	I _d			0.1	µA	V _{rp} = 10V
Monitor PD capacitance	C _m		10	20	pF	V _{rp} = 10V, 1MHz

Note: The engineering spec can be revised without any previous notice.

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Outline Drawing

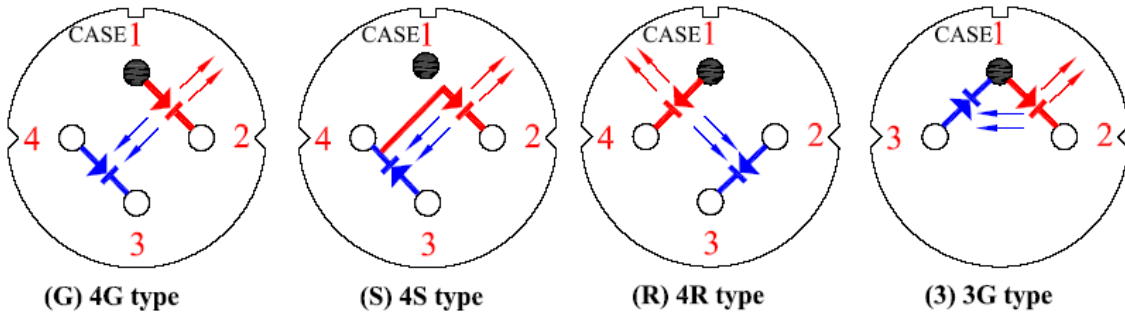


Pin connections

Pin config.	4S
pin no. 1	Case ground
pin no. 2	LD cathode
pin no. 3	m-PD anode
pin no. 4	LD anode/m-PD cathode

Ordering information

KLT	Device Type	Wavelength	Data Rate	Operating Temp.	Package type	Pin Config.
Kodenshi LD TO	1 : FP(BH)	31 : 1310 nm	4 : 1.25 Gbps	2 : -20~70	1 : 1.5 mm ball lens	S : 4S type
	2 : DFB	55 : 1550 nm	5 : 2.5 Gbps	4 : -20~85	2 : 2.0mm ball lens	G : 4G type
	3 : CWDM-DFB	49 : 1490 nm		5 : -40~85	3 : flat window	R : 4R type
	4 : AR LD	xx:1xx0nm ±3nm(CWDM)			4 : aspheric lens	3: 3G
		yB(band):O,E,S,C,L,NI,NC				



Pin configuration of LD TO Package (Bottom view)