

KLT-155452x

Rev.002

Description

KLT-155452x series are long wavelength Fabry-Perot LD sources in TO-56 package with ball lens cap
 KLT-155452x series consist of an InGaAsP strained multi-quantum well(MQW) laser diode(LD) and an InGaAs PIN-PD for output monitoring. They operate at 1550 nm wavelength band and with various data rates from 155Mbps upto 1.25 Gbps.
 They are 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 Ø2.0mm ball lens cap
- High reliability and environmental endurance
- Operating wavelength of 1.55µm band
- Wide operating temperature range from -40°C to 85°C
- Various data rates from 155Mbps upto 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		13	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}		10	V

Optical and Electrical Characteristics (KLT-155452x, Top = 25°C otherwise specified)

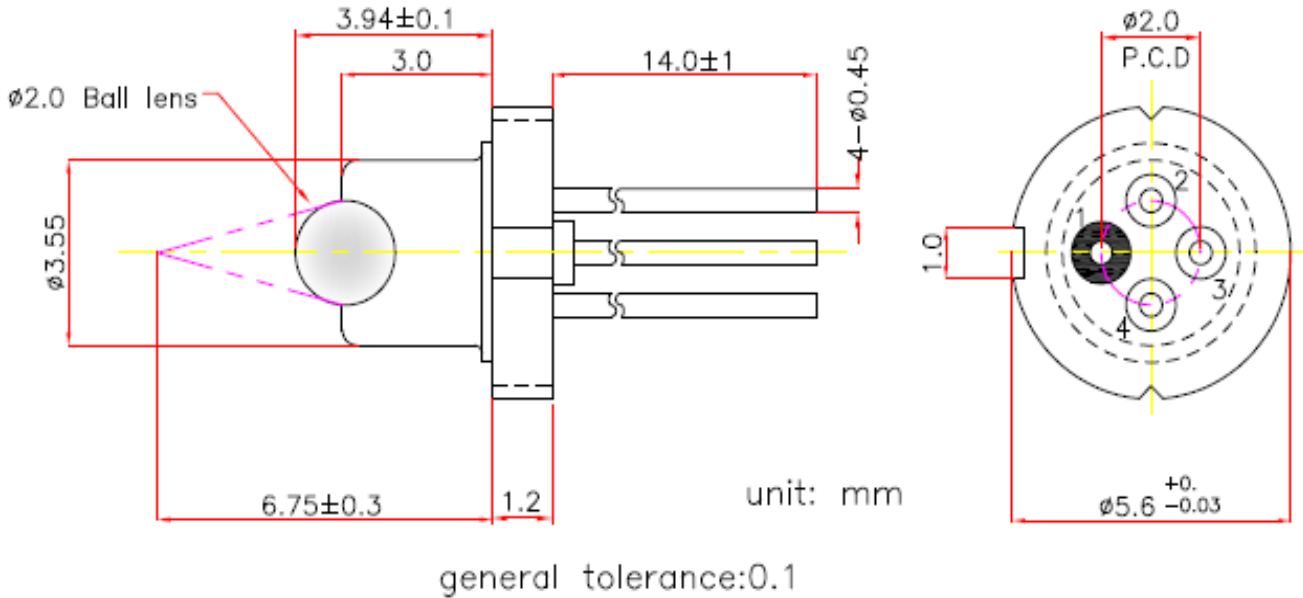
Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Operating temperature	T _{op}	-40		85	°C	
Threshold current	I _{th}	4	8	20	mA	CW, kink free
Operating current	I _{op}		35	42		CW, Po=10mW
Slope efficiency	η	0.2	0.3			CW, Po=10mW
Operating voltage	V _{op}		1.1	1.5	V	at rated Po = 10mw
Center wavelength	λ _c	1530	1550	1570	nm	at rated Po = 10mw
RMS spectral width	Δλ		2	5	nm	at rated Po = 10mw
Optical rise and fall time	t _r			0.5	ns	20 to 80 %, Ib = Ith, Po = 10mw
	t _f			0.5	ns	80 to 20 %, Ib = Ith, Po = 10mw
Monitor PD current	I _m	0.05			mA	at rated Po =10mw, V _{rp} =1V
Monitor PD dark current	I _d			0.1	mA	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

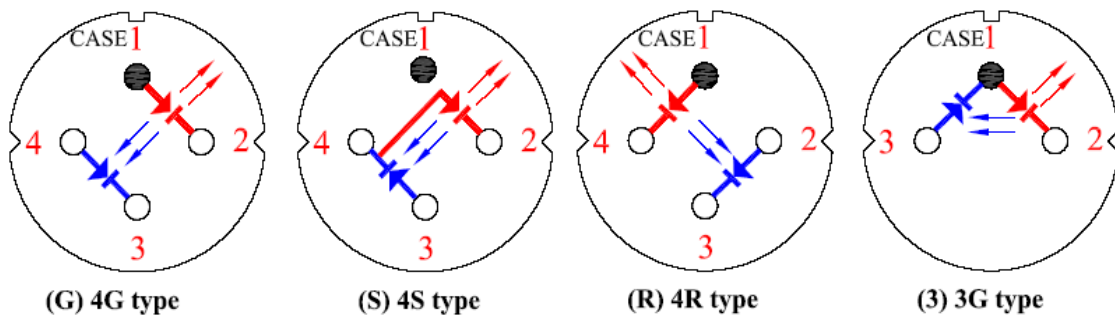


Pin connections

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

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)