KLT-155454x, LD TO can (Aspheric lens)

Description

KLT-155454x series are long wavelength Fabry-Perot LD sources in TO-56 package with asp lens cap
KLT-155454x 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 aspheric lenses 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
- l 125 Mbps, 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	85	°C
Peak laser output power	P_o		18	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-155454x, Top = 25℃ 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	Iop		35	42		CW, Po=12mW
Slope efficiency	η	0.2	0.3			CW, Po=12mW
Operating voltage	V_{op}		1.1	1.5	V	at rated Po = 12mw
Center wavelength	λ_c	1530	1550	1570	nm	at rated Po = 12mw
RMS spectral width	Δλ		2	5	nm	at rated Po = 12mw
Optical rise and fall time	t_r			0.5	ns	20 to 80 %, Ib= Ith,Po =12mw
	t_r			0.5	ns	80 to 20 %, Ib= Ith,Po =12mw
Monitor PD current	I_m	0.1	0.3		mA	at rated Po =12mw, V_{rp}=1V
Monitor PD dark current	I_d			1	μA	V_{rp} = 10V
Monitor PD capacitance	C_m		10	20	pF	V_{rp} = 10V, 1MHz

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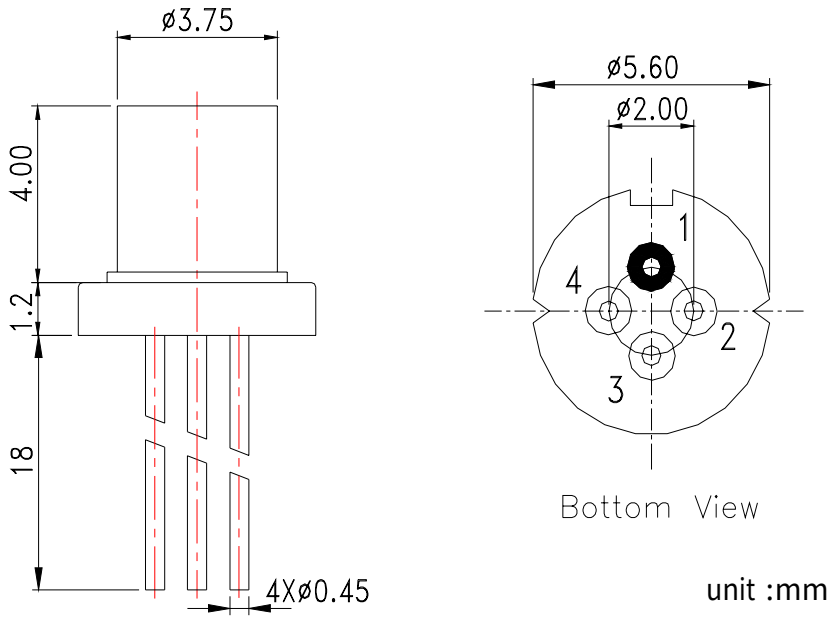
Outline Drawing

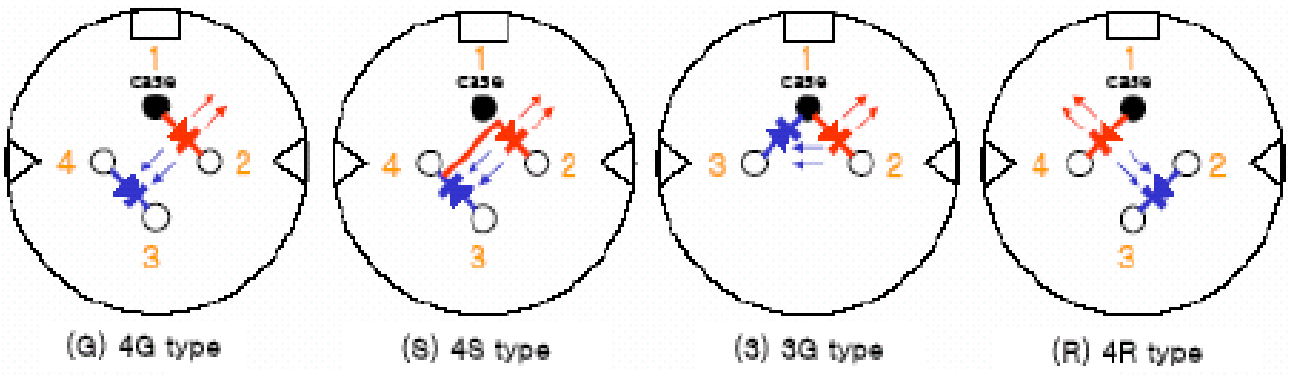


Pin connections

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	0 : CW	0 : 0~50	1 : 1.5 mm ball lens	S : 4S type
	2 : DFB	55 : 1550 nm	3 : 622 Mbps	1 : 0~70	2 : 2.0mm ball lens	G : 4G type
	3 : CWDM-DFB	49 : 1490 nm	4 : 1.25 Gbps	2 : -20~70	3 : flat window	R : 4R type
	4 : AR-LD	xx:1xx0nm ±3nm(CWDM	5 : 2.5 Gbps	3 : 0~85	4 : aspheric lens	3: 3G
	5 : DWDM-DFB	yB(band):O,E,S,C,L,NI,N	6 : 5 Gbps	4 : -20~85		
	6 : LED	zz:15xx ±4nm(DWDM)		5 : -40~85		



Pin configuration of LD TO Can Package (Bottom View)