

KLT231544x, 2.5G DFB LD TO CAN**Description**

KLT-231544x is long wavelength distributed feedback(DFB) laser diode(LD) sources in TO-56 package with flat window or ball lens or aspherical lens cap.

KLT-231544x consists of an InGaAsP strained multi-quantum well(MQW) LD and an InGaAs PIN-PD for output monitoring. It operates at 1310nm wavelength band and with data rates of 2.5 Gbps.

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 flat window or ball lens or aspherical lens cap
- High reliability and environmental endurance
- Operating wavelength of 1.3 μ m band
- Operating temperature range from -20°C to 85°C
- Data rates of 2.5Gbps

APPLICATIONS

- LR1 SONET / SDC OC-3/ STM-1,OC-12/ STM-4,OC-48/STM-16
- 2.5Gbps Gigabit Ethernet
- Suitable for fabrication of coaxial LD module, TOSA, and Bi-Di module
- Passive Optical Networks
- Analog and CATV

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	unit
Operating temperature	T _{op}	-20	85	°C
Storage temperature	T _{stg}	-40	100	°C
Peak laser forward current	I _f		150	mA
Peak laser reverse voltage	V _{RL}		2	V
Peak forward monitor PD current	I _{FD}		2	mA
Peak reverse monitor PD voltage	V _{RD}		20	V

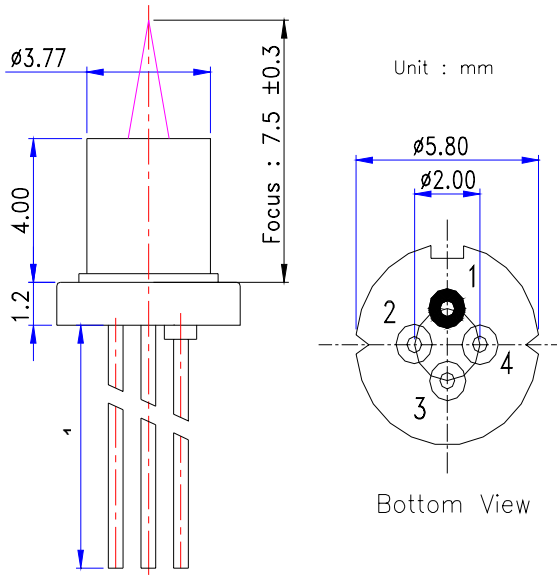
Optical and Electrical Characteristics (Top = 25°C otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I _{th}		8	15	mA	CW
			30	50		CW, Top = 85°C
Rated output power	P _f		5		mW	CW, kink free
Operating current	I _{op}		24	35	mA	at rated Po=5mw
			50	60		at rated Po=5mw, T _{op} =85°C
Operating voltage	V _{op}		1.1	1.5	V	at rated Po=5mw
Slope efficiency	η	0.25	0.3		mW/mA	CW, Po=5mw
		0.15	0.2			CW, Po=5mw, Top = 85°C
Center wavelength	λ_c	1290	1310	1330	nm	at rated Po=5mw
Side mode suppression ratio	SMSR	30	40		dB	at rated Po=5mw
Optical rise and fall time	t _r		0.1	0.2	ns	20 to 80%, I _b = I _{th}
	t _f		0.1	0.2	ns	80 to 20%, I _b = I _{th}
Monitor PD current	I _m	0.05	0.2		mA	at rated Po=5mw, V _{rp} = 1V
Monitor PD dark current	I _d			0.1	μ A	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



(Aspheric Lens type)

Pin connections

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

Ordering information

KLT	Device Type	Wavelength	Data Rate	Operating Temp[°C]	Package type	Pin Config.
KODENSHI	1 : FP(BH)	31 : 1310 nm	0 : CW	0 : 0~50	1 : ball lens cap($\phi 1.5$)	S : 4S type
	2 : DFB	55 : 1550 nm	3 : 622 Mbps	1 : 0~70	2 : ball lens cap($\phi 2.0$)	G : 4G type
LD TO CAN		49 : 1490nm	4 : 1.25 Gbps	2 : -20~70	3 : window cap	R : 4R type
			5 : 2.5Gbps	3 : 0~85	4 : aspheric lens cap	3 : 3G
				4 : -20~85		
				5 : -40~85		

