KLT-255412x

Description

KLT-255442x is long wavelength distributed feedback(DFB) laser diode(LD) sources in TO-56 package with Ø2mm ball lens cap.

KLT-255412x consists of an InGaAsP strained multi-quantum well(MQW) LD and an InGaAs PIN-PD for output monitoring. It operates at 1550nm wavelength band and with data rates of 1.25 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 2mm ball lens cap
- High reliability and environmental endurance
- Operating wavelength of 1.55μm band
- Operating temperature range from 0°C to 70°C
- Data rates of 1.25Gbps

APPLICATIONS

- SONET OC-24/SDH STM-8
- 1.25Gbps Gigabit 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}	0	70	°C
Storage temperature	T_{stg}	-20	85	°C
Peak laser forward current	If		150	mA
Peak laser reverse voltage	V_{rl}		2	V
Peak forward monitor PD current	I_{fp}		2	mA
Peak reverse monitor PD voltage	V_{rp}		10	V

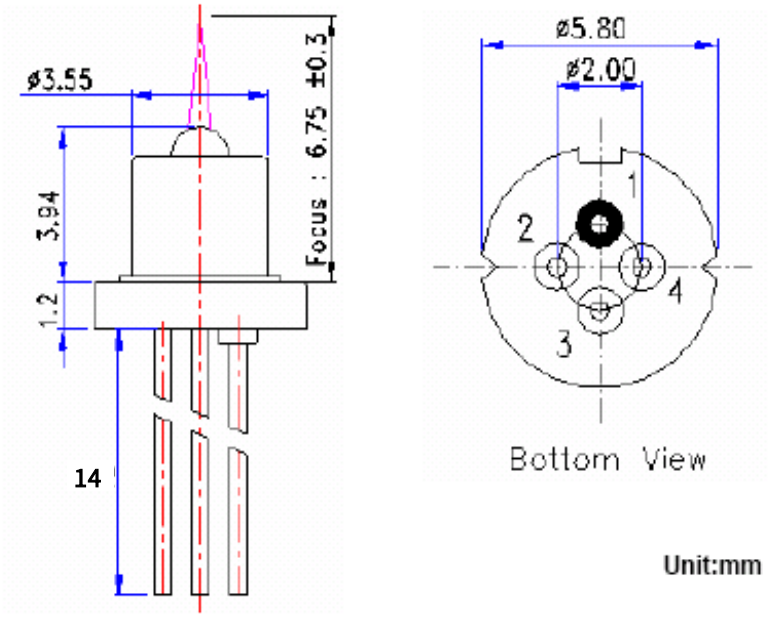
Optical and Electrical Characteristics (Top = 25°C otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I_{th}		9	15	mA	CW
			30	50		CW, Top = 70°C
Rated output power	P_f		5		mW	CW, kink free
Operating current	I_{op}		30	48	mA	at rated P_f
			65	85		at rated P_f, T_{op} = 70°C
Operating voltage	V_{op}		1.1	1.5	V	at rated P_f
Slope efficiency	η	0.15	0.2		mW/mA	CW,Po=5mW
Center wavelength	λc	1530	1550	1570	nm	at rated P_f
Side mode suppression ratio	SMSR	30	40		dB	at rated P_f
Optical rise and fall time	t_r		0.1	0.3	ns	20 to 80%, $I_b = I_{th}$
	t_f		0.1	0.3	ns	80 to 20%, $I_b = I_{th}$
Monitor PD current	I_m	0.05	0.2		mA	at rated P_f , V_{rp} = 1V
Monitor PD dark current	I_d			0.1	μA	V_{rp} = 10V
Monitor PD capacitance	C_t		10	20	pF	V_{rp} = 10V, 1MHz

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

KLT-255412x

Outline Drawing



(2mm ball lens type)

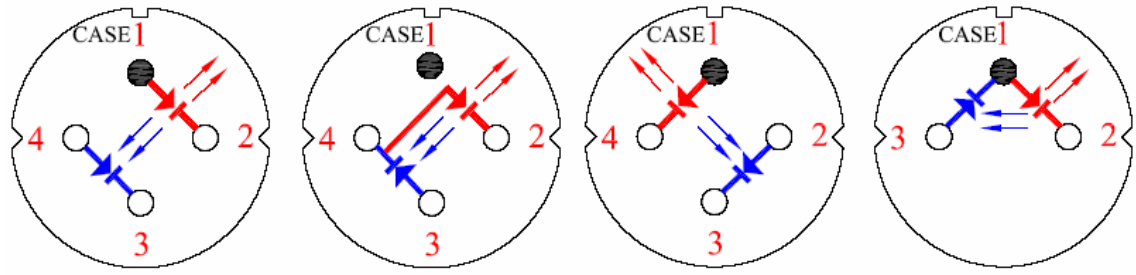
Pin connections

Pin config.	4G	4S
pin no. 1	case ground/LD anode	Case ground
pin no. 2	LD cathode	LD cathode
pin no. 3	Monitor PD cathode	Monitor PD anode
pin no. 4	Monitor PD anode	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	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,NC		4 : -20~85		
		zz:15xx ±4nm(DWDM)		5 : -40~85		

black is available now blue is developing now



(G) 4G type (S) 4S type (R) 4R type (3) 3G type

Pin configuration of LD TO Package (Bottom view)