

KLT-4CB413G

Description

KLT-4CB413G is long wavelength Fabry-Perot AR LD source in TO-56 package with flat window cap.

KLT-4CB413G consists of an InGaAsP strained multi-quantum well(MQW) laser diode and an InGaAs PIN-PD for output monitoring. It at **C-band(1529~1559 nm)** wavelength band and with data rate of 1.25Gbps. It is suitable for fabricating pigtailed LD source, TOSA(transmitter optical sub assembly)

FEATURES

- High performance strained MQW InGaAsP LD with BH(buried hetero-junction) structure
- Hermetically sealed TO-56 package with flat window cap
- High reliability and environmental endurance
- Operating wavelength of C-band(1530~1560 nm)
- Wide operating temperature range from 0 °C to 70 °C
- Data rates of 1.25Gbps

APPLICATIONS

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

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	unit
Operating temperature	T_{op}	0	70	°C
Storage temperature	T_{stg}	-20	85	°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

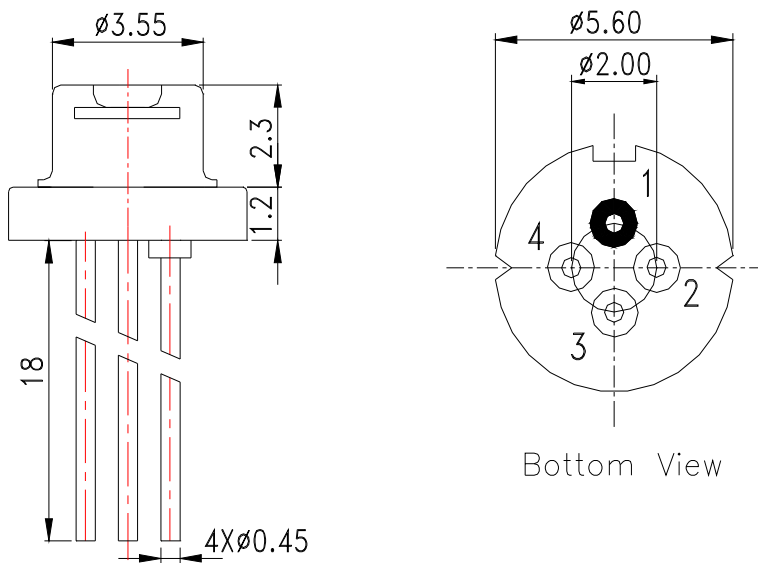
Optical and Electrical Characteristics (KLT-4CB413G, Top = 25 °C otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Operating temperature	T_{op}	0		70	°C	
Threshold current	I_{th}		13	20	mA	CW, kink free
Operating current	I_{op}		28	32		CW, $P_o=3mW$
Slope efficiency	η	0.19	0.21			CW, $P_o=3mW$
Operating voltage	V_{op}		1	1.5	V	at rated $P_o=3mW$
Center wavelength	λ_c	1550	1555	1560	nm	at rated $P_o=3mW$
RMS spectral width	$\Delta\lambda$	12			nm	at rated $P_o=3mW$
Optical rise and fall time	t_r		0.1	0.2	ns	20 to 80 %, $I_b = I_{th}, P_o=5mW$
	t_f		0.1	0.2	ns	80 to 20 %, $I_b = I_{th}, P_o=5mW$
Monitor PD current	I_m	0.1	0.11		mA	at rated $P_o=3mW$, $V_{rp} = 1V$
Monitor PD dark current	I_d			0.1	uA	$V_{rp} = 10V$
Monitor PD capacitance	C_m		10	20	pF	$V_{rp} = 10V$, 1MHz

Specifications are subject to change without notice.

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Outline Drawing

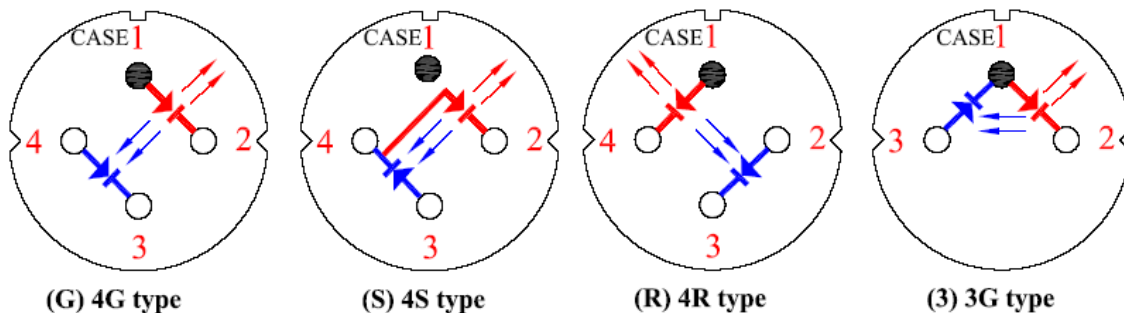


Pin connections

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:1x0nm ±3nm(CWDM)			4 : aspheric lens	3: 3G
		yB(band):O,E,S,C,L,NI,NC				



Pin configuration of LD TO Package (Bottom view)