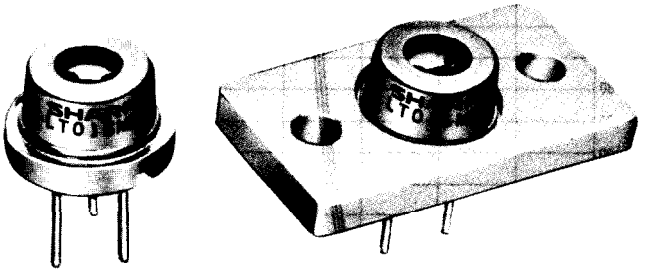
LT015MD/MF

Features

- High power (maximum optical power output: 40 mW)
- Wavelength 830nm
- Single transverse mode

Applications

- Optical disk memories
- Medical apparatus
- Optical floppy disks
- Optical memory cards
- Information processing equipment



Absolute Maximum Ratings

(Tc = 25 C)

Parameter	Symbol	Ratings	Units
Optical power output	Po	40	mW
Reverse voltage	Laser	2	V
	PIN	30	V
Operating temperature *1	Topr	−10 to +50	C
Storage temperature *1	Tstg	−40 to +85	C

*1 Case temperature

Electro-optical Characteristics *'

Tc = 25°C)

Parameter			Symbol	Condition	Ratings MIN	Ratings TYP	Ratings MAX	Units
Threshold current			Ith			60	80	mA
Operating current			Iop	Po = 30mW	—	95	130	mA
Operating voltage			Vop	Po = 30mW	—	1.75	2 2	V
Wavelength"z			λp	Po = 30mW	815	830	845	nm
Monitor current			Im	Po = 30mW, V_R = 15V	75	250	750	μA
Radiation characteristics	Angle *3	Parallel to junction	θ //	P O = 30mW	8		14	deg
		Perpendicular to junction	θ ⊥	Po = 30mW	20	9.5	38	deg
	Ripple			Po = 30mW		—	±20	%
Emission point accuracy	Angle		Δφ //	Po=30m W		—	±2	deg
			Δφ ⊥	Po = 30mW		—	±3	deg
	Position *4		Δx, Δy, Δz				±80	μm
Differential efficiency			η	20mW I_F(30mW) − I_f(10mW)	0.5	0.8	1.1	mW/mA

*1 Initial value
*2 Single transverse mode
*3 Angle at 50% peak Intensify (full width al half -maximum)
*4 Not specified for LTO15MF

Electrical Characteristics of Photodiode

(Tc=25 C

Parameter	Symbol	Condition	Ratings MIN	Ratings TYP	Ratings MAX	Units
Sensitivity	S	V_R = 15V	—	8.3		μA/mW
Dark current	I_D	V_R = 15V			150	nA
Terminal capacitance	Ct	V_R = 15V	—	8	20	pF