

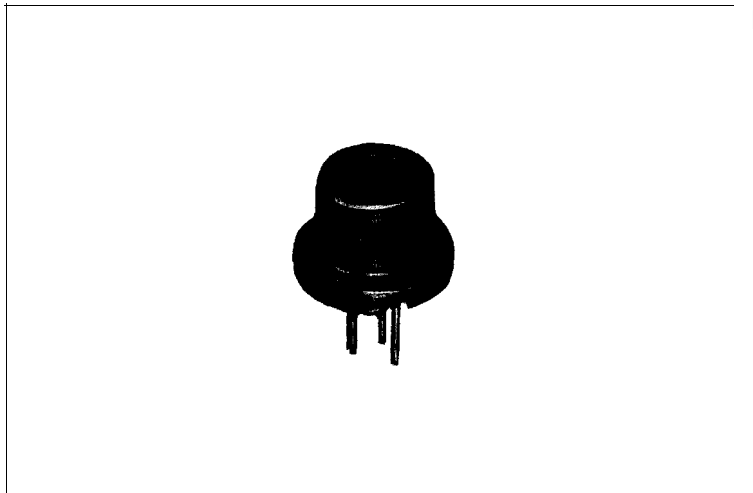
LTO24AD

Features

- High power (maximum optical power output: 35mW)
- Low noise: S/N -80 dB at superposed high frequency (according to measurement method Fig. 27-2)
- Wavelength: 780nm
- Single transverse mode

Applications

- Optical disk memories
- Information processing equipment



Absolute Maximum Ratings

(T_c=25°C)

Parameter	Symbol	Ratings	Units
Optical power output	P _o	35	mW
Reverse voltage	V _R	2	v
Laser PIN		30	
Operating temperatures ¹	T _{opr}	-10 to +60	°C
Storage temperature ^{**}	T _{stg}	-40 to +85	°C - - 1

* 1 Case temperature

Electro-optical Characteristics *¹

(T_c=25°C)

Parameter	Symbol	Condition	Ratings			Units	
			MIN	TYP	MAX		
Threshold current	I _{th}		—	60	85	mA	
Operating current	I _{op}	P _o =30mW	—	115	150	mA	
Operating voltage	V _{op}	P _o =30m W	—	1.8	2.2	v	
Wavelength ^{**}	λ _p	P _o =30m W	770	780	795	nm	
Monitor current	I _m	P _o =30mW V _R =15V	0.3	1.0	2.0	mA	
Radiation characteristics	Angle * ³	Parallel to junction	θ _{//}	8	9.5	13	deg
		Perpendicular to junction	θ _⊥	20	26	32	deg
	Ripple			—	—	±20	%
Emission point accuracy	Angle	P _o =30m W	Δφ _{//}	—	—	±2	deg
		P _o =30mW	Δφ _⊥	—	—	±3	deg
	Position		Δx, Δy, Δz	—	—	±80	μm
Differential efficiency	η	20mW I _r (30mW) - I _r (10mW)	0.3	0.55	0.8	mW/mA	

* 1 Initial value

* 3 Angle at 50% peak intensity (full width at half-maximum)

* 2 Single transverse mode

Electrical Characteristics of Photodiode

(T_c=25°C)

Parameter	Symbol	Condition	Ratings		Units
			MIN	TYP	
Sensitivity	s	V _R =15V	—	33.3	mA/mW
Dark current	I _D	V _R =15V	—	—	nA
Terminal capacitance	C _t	V _R =15V	—	8	pF