

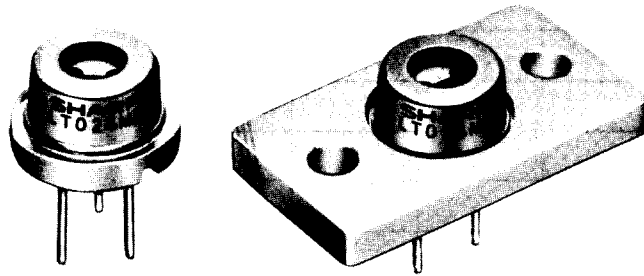
LT024MD/MF

Features

- High power (maximum optical power output: 30 mW)
- 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	30	mW
Reverse voltage	V _R	2	V
Operating temperature* 1	T _{opr}	-10 to +50	°C
Storage temperature* 1	T _{stg}	-40 to +85	°C

* 1 Case temperature

Electro-optical Characteristics *1

T_c = 25°C

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Threshold current	I _{th}	—	—	55	80	mA
Operating current	I _{op}	P _o = 20mW	—	85	120	mA
Operating voltage	V _{op}	P _o = 20mW	—	1.85	2.2	v
Wavelength *2	λ _p	P _o = 20mW	765	780	795	nm
Monitor current	I _m	P _o = 20mW V _R = 15V	50	160	500	μA
Radiation characteristics	Angle *3	Parallel to junction	8	10	14	deg
		Perpendicular to junction	20	29	38	deg
	Ripple	P _o = 20mW	—	—	±20	%
Emission point accuracy	Angle	Δφ _{//}	—	—	±2	deg
		Δφ _⊥	—	—	±3	deg
	Position *4	Δx, Δy, Δz	—	—	±80	μm
Differential efficiency	η	10mW I _r (20mW) - I _r (10mW)	0.5	0.75	11	mW/mA

* 1 Initial value

* 2 Single transverse mode

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

* 4 Not specified for LT024MF

Electrical Characteristics of Photodiode

(T_c = 25°C)

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Sensitivity	S	V _R = 15V	—	8	—	μA/mW
Dark current	I _D	V _R = 15V	—	—	150	nA
Terminal capacitance	C _t	V _R = 15V	—	8	20	pF