

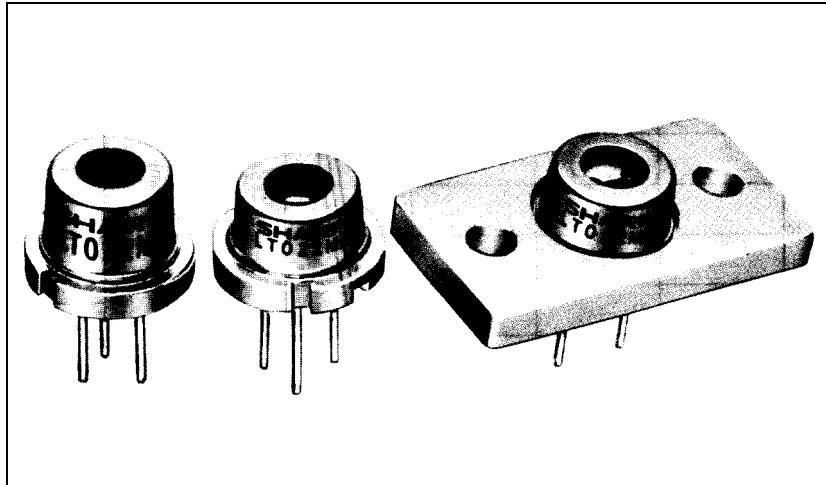
LT022MC/MD/MF

Features

- Low noise
S/N: -60 dB (according to measurement method Fig.27-2)
- Wavelength: 780nm
- Single transverse mode

Applications

- CD-ROMs
- CD players
- Information processing equipment



Absolute Maximum Ratings

(T_c = 25°C)

Parameter	Symbol	Ratings	Units
Optical power output	P _o	5	mW
Reverse voltage	Laser PIN V _R	2	V
		30	
Operating temperature *1	T _{op}	-10 to +60	°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}	—	—	50	80	mA
Operating current	I _{op}	P _o = 3mW	—	65	100	mA
Operating voltage	V _{op}	P _o = 3mW	—	1.75	2.2	V
Wavelength *2	λ _p	P _o = 3mW	770	780	790	nm
Monitor current	I _m	P _o = 3mW V _R = 15V	0.3	0.9	1.6	mA
Radiation characteristics	Angle *3 Parallel to junction	P _o = 3mW	8.5	11	16	deg
	Perpendicular to junction	P _o = 3mW	20	33	45	deg
Ripple		P _o = 3mW	—	—	+20	%
Emission point accuracy	Angle	P _o = 3mW	—	—	±2	deg
		P _o = 3mW	—	—	±3	deg
Position *4	Δx, Δy, Δz	P _o = 3mW	—	—	±80	μm
Differential efficiency	η	2mW I _F (3mW) - I _F (1mW)	0.1	0.25	0.6	mW/mA

*1 Initial value

*2 Single transverse mode

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

*4 Not specified for LT022MF

Electrical Characteristics of Photodiode

(T_c = 25°C)

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Sensitivity	S	V _R = 15V	—	0.3	—	mA/mW
Dark current	I _D	V _R = 15V	—	—	150	nA
Terminal capacitance	C _t	V _R = 15V	—	8	20	pF