

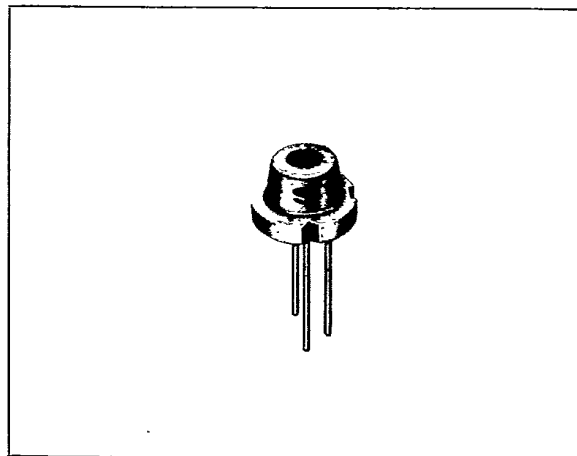
LT022MS

Features

- Compact (diameter: 5.6 mm)
- Low noise
S/N: 60 dB (according to measurement method Fig. 29-2)
- Wavelength: 780nm
- Single transverse mode

Applications

- CD players
- CD-ROMs
- Information processing equipment



Absolute Maximum Ratings

(Tc=25°C)

Parameter	Symbol	Ratings	Units
Optical power output	Po	5	mW
Reverse voltage	VR	2	V
		30	
Operating temperature *1	Topr	-10 ~ +60	°C
Storage temperature *1	Tstg	-40 ~ +85	°C
Soldering temperature *2	Tsol	260 (less than 5 seconds)	°C

*1 Case temperature *2 At point 1.6 mm from lead base

Electro-optical Characteristics *1

(Tc=25°C)

Parameter			Symbol	Condition	Ratings			Units
					MIN	TYP	MAX	
Threshold current			I _{th}	—	—	45	70	mA
Operating current			I _{op}	P _o =3mW	—	55	85	mA
Operating voltage			V _{op}	P _o =3mW	—	1.75	2.0	V
Wavelength*2			λ _p	P _o =3mW	770	780	795	nm
Monitor current			I _m	P _o =3mW V _R =15V	0.12	0.4	0.85	mA
Radiation characteristics	Angle*3	Parallel to junction	θ _∥	P _o =3mW	8.5	11	16	deg
		Perpendicular to junction	θ _⊥	P _o =3mW	25	35	48	deg
	Ripple			P _o =3mW	—	—	±20	%
Emission point accuracy	Angle	Δφ _∥	P _o =3mW	—	—	±2	deg	
		Δφ _⊥	P _o =3mW	—	—	±3	deg	
	Position	Δx, Δy, Δz	—	—	—	±80	μm	
Differential efficiency			η	$\frac{2\text{mW}}{I_F(3\text{mW})-I_F(1\text{mW})}$	0.15	0.3	0.6	mW/mA

*1 Initial value

*2 Single transverse mode

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

Electrical Characteristics of Photodiode

(Tc=25°C)

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Sensitivity	S	VR=15V	—	0.13	—	mA/mW
Dark current	ID	VR=15V	—	—	150	nA
Terminal capacitance	Ct	VR=15V	—	3.5	10	pF