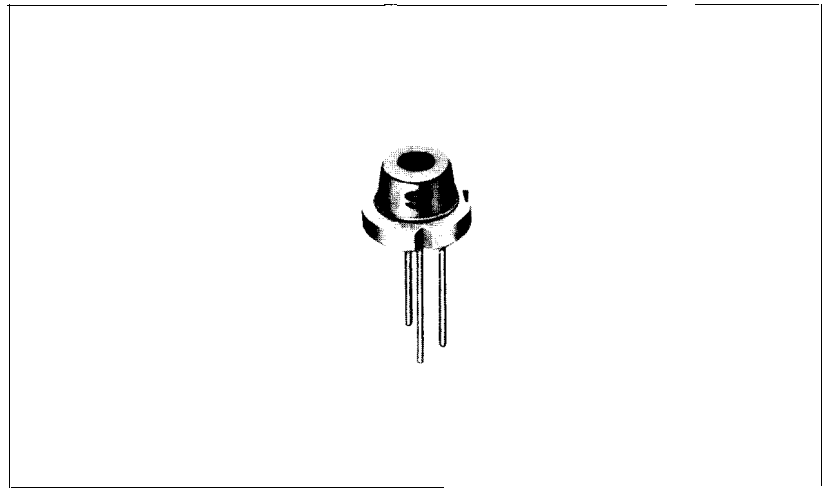
LT023MS

Features

- Compact (diameter. 5.6mm)
- Low noise S/ N: −80 dB (according to measurement method Fig. 27-2)
- Wavelength: 780nm
- Single transverse mode
- Multi longitudinal mode

Applications

- Video disc players
- Fiber optic communications
- Light source for analog processing
- Measurement instruments
- Analysis instruments



Absolute Maximum Ratings

(Tc=25°C)

Parameter		Symbol	Ratings	Units
Optical power output		Po	5	mW
Reverse voltage	Laser	V_R	2	V
	PIN		30	
Operating temperature *1		Topr	−10 to +70	°C
Storage temperature *1		Tstg	−40 to +85	°C

* I-Case temperature

Electro-optical Characteristics *'

(Tc=25°C)

Parameter		Symbol	Condition	Ratings MIN	Ratings TYP	Ratings MAX	Unita
Threshold current		Ith			45	60	mA
Operating current		Iop	Po=3mW		55	75	mA
Operating voltage		Vop	Po=3mW		175	2.0	v
Wavelength"²		λp	Po=3mW	770	780	795	nm
Monitor current		Im	Po=3mW V_R=15V	0.20	0.40	0.85	mA
Radiation characteristics	Angle *3 Parallel to junction	a //	Po=3mW	8.5	11	16	deg
	Angle *3 Perpendicular to junction	θ⊥	Po=3mW	29	38	48	deg
	Ripple		Po=3mW	—	—	±20	%
Emission point accuracy	Angle	Δφ //	Po=3mW			±2	deg
		Δφ⊥	Po=3mW	—	—	±3	deg
	Position	Δx, Δy, Δz	—	—	—	±80	μm
Differential efficiency		η	2mW / I_F(3mW)−I_F(1mW)	0.1	0.3	0.5	mW/mA
Coherence		γ	Po=3mW	—	—	0.47	

* 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 MIN	Ratings TYP	Ratings MAX	Units
Sensitivity	s	V_R=15V		013		mA/mW
Dark current	I_D	V_R=15V			150	nA
Terminal capacitance	Ct	V_R=15V		3 5 -	10	pF