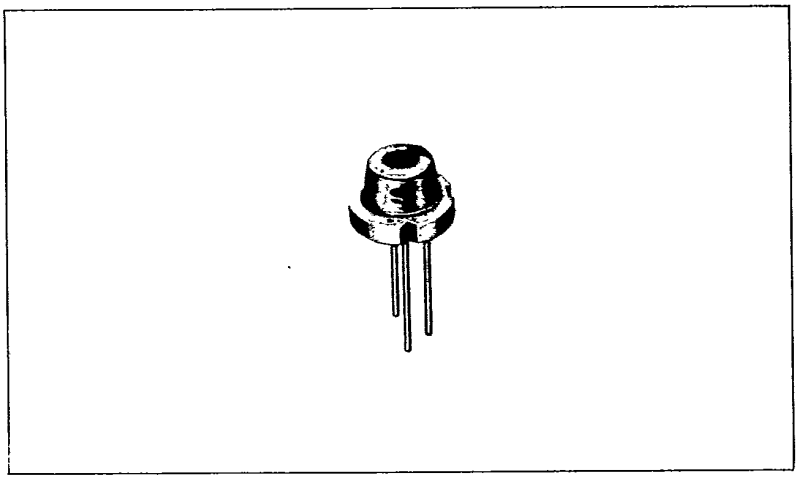
LT023PS

Features

- Compact (diameter: 5.6mm)
- Low noise S/N: 80 dB (according to measurement method Fig. 29-2)
- 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~+70	°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 MIN	Ratings TYP	Ratings MAX	Units
Threshold current			Ith	——	——	45	60	mA
Operating current			Iop	Po=3mW	——	55	75	mA
Operating voltage			Vop	Po=3mW	——	1.75	2.0	V
Wavelength *2			λp	Po=3mW	770	780	795	nm
Monitor current			Im	Po=3mW V_R=15V	0.08	0.20	0.42	mA
Radiation characteristics	Angle *3	Parallel to junction	θ//	Po=3mW	8.5	11	16	deg
		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	$\frac{2mW}{I_F(3mW)-I_F(1mW)}$	0.1	0.3	0.5	mW/mA
Coherence			γ	Po=3mW	——	——	0.47	

*1 Initial value *3 Angle at 50% peak intensity (full width at half-maximum)
*2 Single transverse mode

Electrical Characteristics of Photodiode

(Tc=25°C)

Parameter	Symbol	Condition	Ratings MIN	Ratings TYP	Ratings MAX	Units
Sensitivity	S	V_R=15V	——	0.07	——	mA/mW
Dark current	I_D	V_R=15V	——	——	150	nA
Terminal capacitance	Ct	V_R=15V	——	9	——	pF