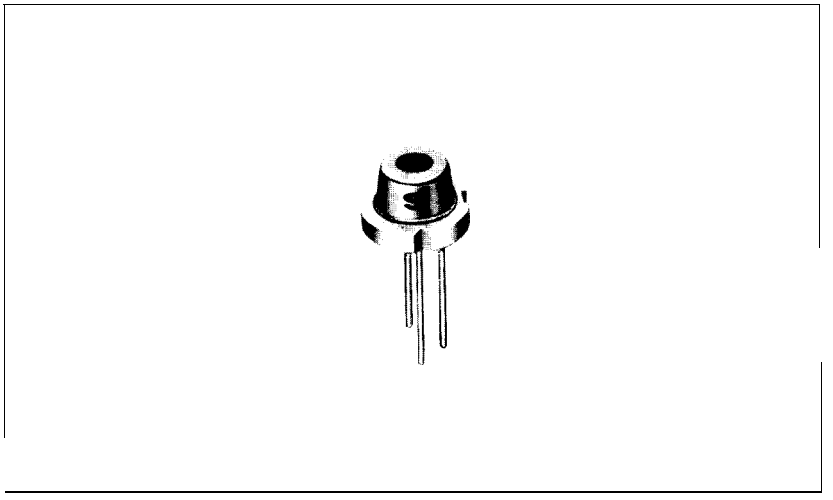
Features

- 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

* 1 Case temperature

Electro-optical Characteristics *'

(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*'		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, Parallel to junction	θ //	Po = 3mW	8.5	11	16	deg
	Angle, 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, Δx, Δy, Δz	—	—	—	±80	μm
Differential efficiency		η η	2mW / I_F(3mW) − I_F(1mW)	0 011	0.3	0.5	mW/mA
Coherence		γ	Po = 3mW			047	

* 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	VR=15V		0.07		mA/mW
Dark current	I_D	V_R = 15V			150	nA
Terminal capacitance	Ct	V_R = 15V	—	9		pF