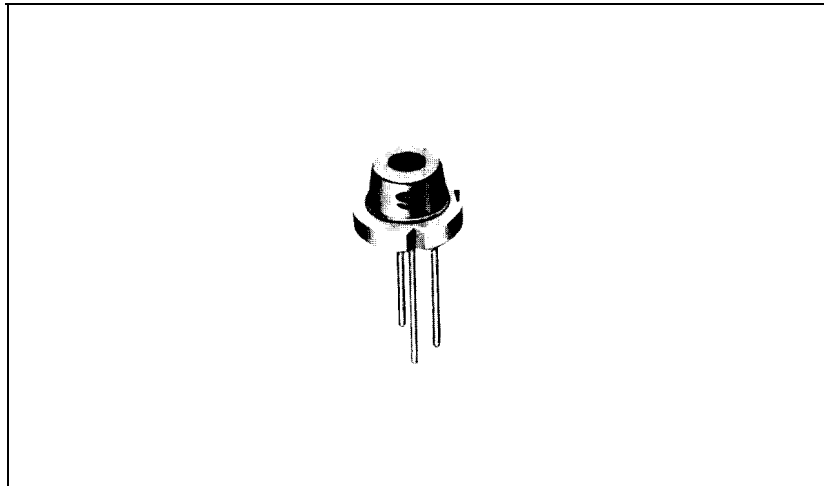


Features

- Wide temperature range
(-30°C to +85°C)
- 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	P _o	5	mW
Reverse voltage	Laser	2	V
	PIN	30	
Operating temperature *1	T _{opr}	-30 to +85	°C
Storage temperature *1	T _{stg}	-40 to +100	°C

*1 Case temperature

Electro-optical Characteristics **

(Tc=25°C)

Parameter	Symbol	Condition	Ratings			Units	
			MIN	TYP	MAX		
Threshold current	I _{th}		—	45	60	mA	
Operating current	I _{op1}	P _o =3mW	—	55	75	mA	
Operating voltage	V _{op}	P _o =3mW	—	1.75	2.0	V	
Wavelength**	λ _p	P _o =3mW	770	780	795	nm	
Monitor current	I _m	P _o =3mW V _R =15V	0.20	0.40	0.65	mA	
Radiation characteristics	Angle *3	Parallel to junction	θ _{//}	8.5	11	16	deg
		Perpendicular to junction	θ _⊥	29	38	48	deg
Emission point accuracy	Ripple	P _o =3mW	—	—	±20	%	
	Angle	Δφ _{//}	P _o =3mW	—	—	±2	deg
		Δφ _⊥	P _o =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	P _o =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			Units
			MIN	TYP	MAX	
Sensitivity	S	V _R =15V	—	0.13	—	mA/mW
Dark current	I _D	V _R =15V	—	—	—	nA
Terminal capacitance	C _t	V _R =15V	—	3.5	—	pF