Features

- High power (maximum optical power output: 30 mW)
- Wavelength: 780nm
- Single transverse mode

Applications

- Optical disk memories
- Information processing equipment

Absolute Maximum Ratings

(Tc = 25"C

Parameter	Symbol	Ratings	Units
Optical power output	Po	30	mW
Reverse voltage (Laser)	V_R	2	V
Reverse voltage (PIN)	V_R	30	V
Operating temperature *1	Topr	−10 to +50	°C
Storage temperature *1	Tstg	−40 to +85	°C

* 1 Case temperature

Electro-optical Characteristics *1

Tc=25°C

Parameter		Symbol	Condition	MIN	TYP	MAX	Units
Threshold current		Ith			55	80	mA
Operating current		Iop	Po=20mW		85	120	mA
Operating voltage		Vop	Po=20mW		1.85	2.2	V
Wavelength *2		λp	Po = 20mW	7.65	780	795	nm
Monitor current		Im	Po=20mW, V_R=15V	25	80	250	μA
Radiation characteristics	Angle *3 Parallel to junction	θ //	Po = 20mW	8	10	14	deg
	Angle Perpendicular to junction	θ⊥	Po=20mW	20	29	38	deg
Emission point accuracy	Ripple		Po=20mW			±20	%
	Angle	Δφ //	Po=20mW			±2	deg
		Δφ⊥	Po=20mW			±3	deg
	Position	Δx, Δy, Δz				±80	μm
Differential efficiency		η	1.0mW / I_F(20mW)−I_F(10mW)	0.5	0.75	1.1	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)

Paramater	Symbol	Condition	Ratings MIN	Ratings TYP	Ratings MAX	Units
Sensitivity	S	V_R=15V	—	4	—	μA/mW
Dark current	I_D	V_R=15V	—	—	150	nA
Terminal capacitance	Ct	V_R=15V	—	18	20	pF