

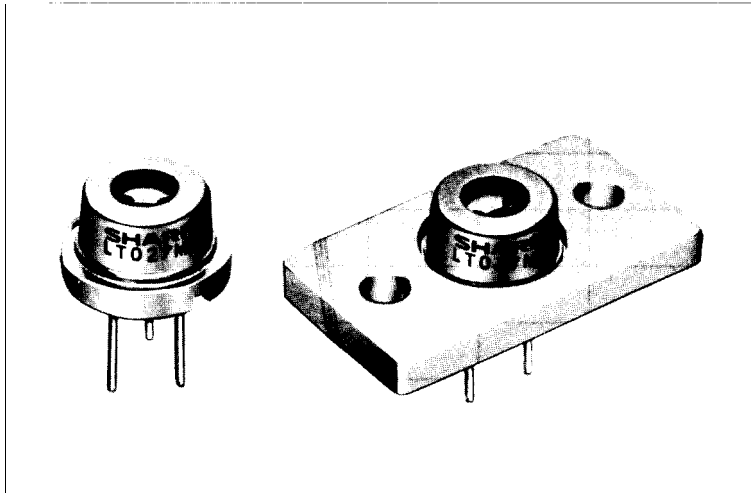
LT027MD/MF

Features

- High power (maximum optical power output: 10 mW)
- Wavelength: 780nm
- Single transverse mode

Applications

- Medium speed laser printers
- Information processing equipment



Absolute Maximum Ratings

(T_c = 25°C)

Parameter	Symbol	Ratings	Units
Optical power output	P _o	10	mW
Reverse voltage ^{Laser} _{PIN}	V _R	2 30	V
Operating temperature **	T _{opr}	-10 to +60	°C
Storage temperature **	T _{stg}	-40 to +85	°C

* 1 Case temperature

Electro-optical Characteristics **

T_c = 25°C

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Threshold current	I _{th}		—	45	80	mA
Operating current	I _{op}	P _o = 7mW	—	65	100	mA
Operating voltage	V _{op}	P _o = 7mW	—	1.75	2.2	v
Wavelength **	λ _p	P _o = 7mW	770	780	790	nm
Monitor current	I _m	P _o = 7mW V _R = 15V	0.7	2.1	3.7	mA
Radiation characteristics	Angle ^{*3} Parallel to junction	P _o = 7mW	8	10	14	deg
	Angle Perpendicular to junction	P _o = 7mW	20	29	38	deg
Ripple		P _o = 7mW			±20	%
Emission point accuracy	Angle	P _o = 7mW			±2	deg
	Angle	P _o = 7mW			±3	deg
Position *4	Δx, Δy, Δz	P _o = 7mW			±80	μm
		4mW				
Differential efficiency	η	I _F (7mW) - I _F (3mW)	0.2	0.35	0.6	mW/mA

* 1 Initial value

* 2 Single transverse mode

* 3 Angle at 500μ peak intensity (full width at half-maximum)

* 4 Not specified for LT027MF

Electrical Characteristics of Photodiode

(T_c = 25°C)

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Sensitivity	S	V _R = 15V	—	0.3	—	mA/mW
Dark current	I _D	V _R = 15V	—	—	250	nA
Terminal capacitance	C _t	V _R = 15V	—	8	20	pF