

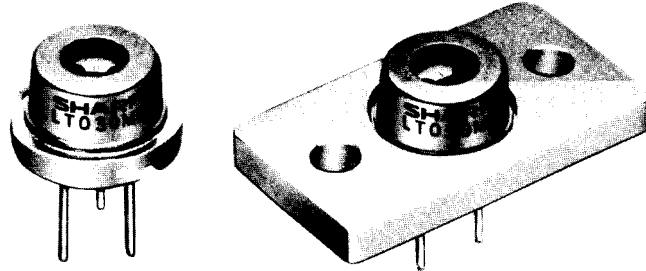
LT030MD/MF

Features

- Wavelength 750nm
- Single transverse mode

Applications

- High speed laser printers
- Bar code readers
- Medical apparatus
- Measurement instruments
- Analysis Instrument
- Information processing equipment



Absolute Maximum Ratings

(T_c = 25°C)

Parameter	Symbol	Rating	Units
Optical power output	P _o	5	mW
Reverse voltage	V _R	2	v
Operating temperature *1	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	Rating			Units
			MIN	TYP	MAX	
Threshold current	I _{th}			50	80	mA
Operating current	I _{op}	P _o = 3mW		65	120	mA
Operating voltage	V _{op}	P _o = 3mW		1.85	2.3	v
Wavelength*	λ _p	P _o = 3mW	740	750	760	nm
Monitor current	I _m	P _o = 3mW V _R = 15V	0.3	0.9	1.6	mA
Radiation characteristics	Angle*3	Parallel to junction	θ	7	10	deg
		Perpendicular to junction	θ _⊥	20	-38	deg
Ripple		P _o = 3mW			±20	%
Emission point accuracy	Angle	P _o = 3mW	Δφ		±2	deg
		P _o = 3mW	Δφ _⊥		±3	deg
Position*4			Δx, Δy, Δz		±80	μm
Differential efficiency	η	2mW I _F (3mW) - I _F (1mW)		0.25	0.6	mW/mA

*1 Initial value

*3 Angle at 50% peak intensity (full width at half-maximum)

*2 Single transverse mode

*4 Not specified for LT030MF

Electrical Characteristics of Photodiode

(T_c = 25°C)

Parameter	Symbol	Condition	Rating			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

LT030 Series Characteristics Diagrams

Fig. 43-1 Forward Current vs. Forward Voltage

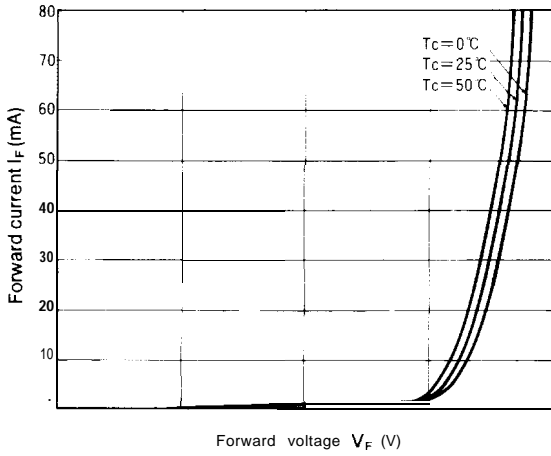


Fig. 43-4 Wavelength vs. Temperature

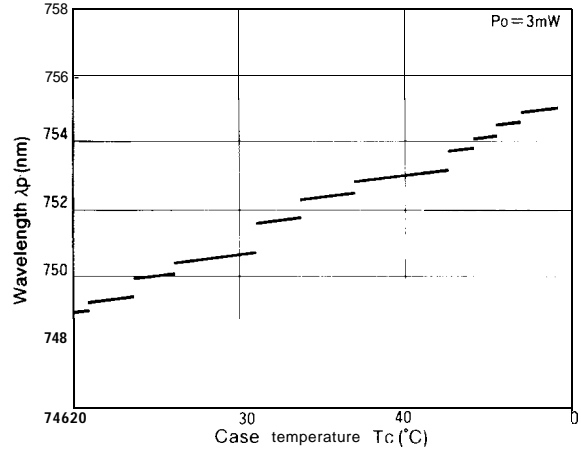


Fig. 43-2 Optical Power Output vs. Forward

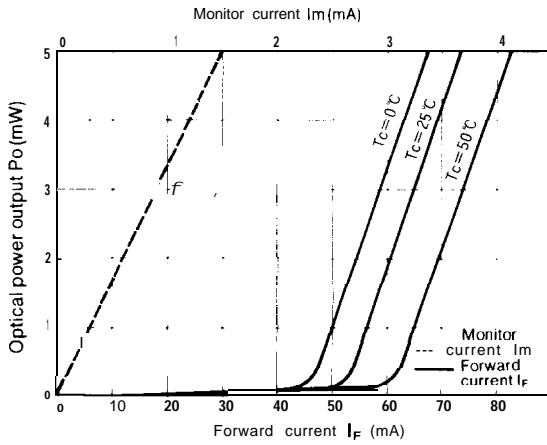


Fig. 43-5 Optical Power Output Dependence of Wavelength

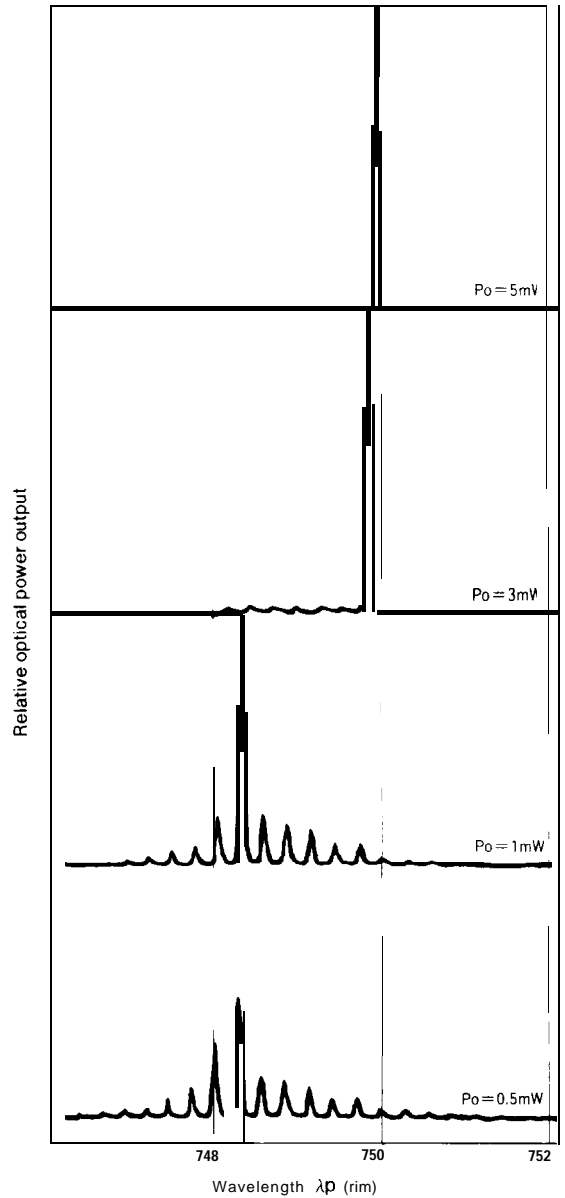
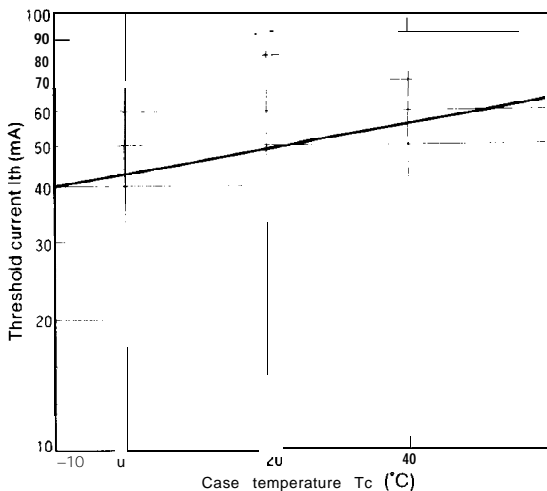


Fig. 43-3 Threshold Current vs. Temperature



Note All data on this page is typical only, and is not intended as a specification. The shapes of these curves can be used as a general reference, but the actual characteristics will vary from device to device.