

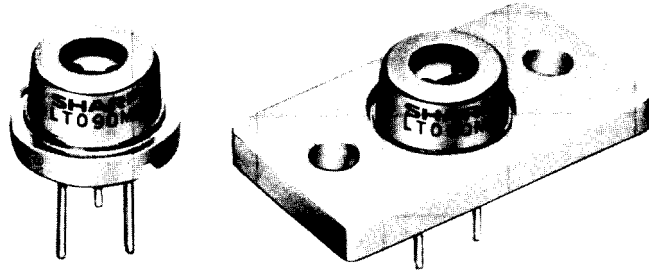
# LT090MD/MF

## Features

- High power (maximum optical power output: 100 mW 3-channel)
- Wavelength: 830nm

## Applications

- Measurement Instruments
- Medical apparatus
- Fiber optic communications



## Absolute Maximum Ratings

Parameter	Symbol	Rating	Units
Optical power output	$P_o$	100	mW
Reverse voltage	Laser PIN $V_R$	2 3.0	V
Operating temperature*1	$T_{opr}$	-10 to +50	°C
Storage temperature*1	$T_{stg}$	-40 to +85	°C

\* 1 Case temperature

## Electro-optical Characteristics \* 1

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Threshold current	$I_{th}$			200	270	mA
Operating current	$I_{op}$	$P_o = 80mW$		310	430	mA
Operating voltage	$V_{op}$	$P_o = 80mW$		1.8	2.2	V
Wavelength	$\lambda_p$	$P_o = 80mW$	810	830	850	nm
Monitor current	$I_m$	$P_o = 80mW$ $V_R = 15V$	300	800	3000	$\mu A$
Radiation characteristics	Angle * 2 Parallel to junction Perpendicular to junction $\theta_{  }$ $\theta_{\perp}$	$P_o = 80mW$	7	10	14	deg
		$P_o = 80mW$ 70mW	20	28	38	deg
Differential efficiency	$\eta$	$I_e(80mW) - I_e(10mW)$	0.4	0.7	1.2	mW/mA

\* 1 Initial value

\* 2 Angle at 50% peak intensity (Half width at half-maximum)

## Electrical Characteristics of Photodiode

Parameter	Symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Sensitivity	$S$	$V_R = 15V$		10.0		$\mu A/mW$
Dark current	$I_D$	$V_R = 15V$			250	nA
Terminal capacitance	$C_t$	$V_R = 15V$	8		2.0	pF