

# LT011 PS

## Features

- Compact (diameter: 5.6 mm)
- Wavelength: 840nm
- Single transverse mode

## Applications

- Measurement Instruments
- Analysis instruments



## Absolute Maximum Ratings

(T<sub>c</sub> = 25°C)

Parameter	symbol	Ratings	Units
Optical power output	P <sub>o</sub>	5	mW
Reverse voltage	Laser	2	
	PIN	30	
Operating temperature **	T <sub>opr</sub>	-10 to +60	°C
Storage temperature * 1	T <sub>stg</sub>	-40 to +85	°C

\* 1 Case temperature

## Electro-optical Characteristics \*\*

(T<sub>c</sub> = 25°C)

Parameter	Symbol	Condition	Ratings			Units	
			MIN	TYP	MAX		
Threshold current	I <sub>th</sub>			50	70	mA	
Operating current	I <sub>op</sub>	P <sub>o</sub> = 3 mW		60	85	mA	
Operating voltage	V <sub>op</sub>	P <sub>o</sub> = 3mW		1.75	2.0	v	
Wavelength *2	λ <sub>p</sub>	P <sub>o</sub> = 3mW	825	840	850	nm	
Monitor current	I <sub>m</sub>	P <sub>o</sub> = 3mW V <sub>R</sub> = 15V	0.08	0.20	0.42	mA	
Radiation characteristics	Angle <sup>3</sup>	Parallel to junction		8.5	12	16	deg
		Perpendicular to junction		25	40	48	deg
	Ripple	P <sub>o</sub> = 3mW			± 20	%	
Emission point accuracy	Angle	Δφ <sub>∥</sub>			± 2	deg	
		Δφ <sub>⊥</sub>			± 3	deg	
	Position	Δx, Δy, Δz			± 80 ± 80	μm	
Differential efficiency	η	$\frac{2mW}{I_f(3mW) - I_f(1mW)}$ , °1 2		0.25	0.60	mW/mA	

\* 1 Initial value

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

\* 2 Single transverse mode

## Electrical Characteristics of Photodiode

(T<sub>c</sub> = 25°C)

Parameter	symbol	Condition	Ratings			Units
			MIN	TYP	MAX	
Sensitivity	s	V <sub>R</sub> = 15V		0.07		mA/mW
Dark current	I <sub>D</sub>	V <sub>R</sub> = 15V			1.50	nA
Terminal capacitance	C <sub>t</sub>	V <sub>R</sub> = 15V		9		pF