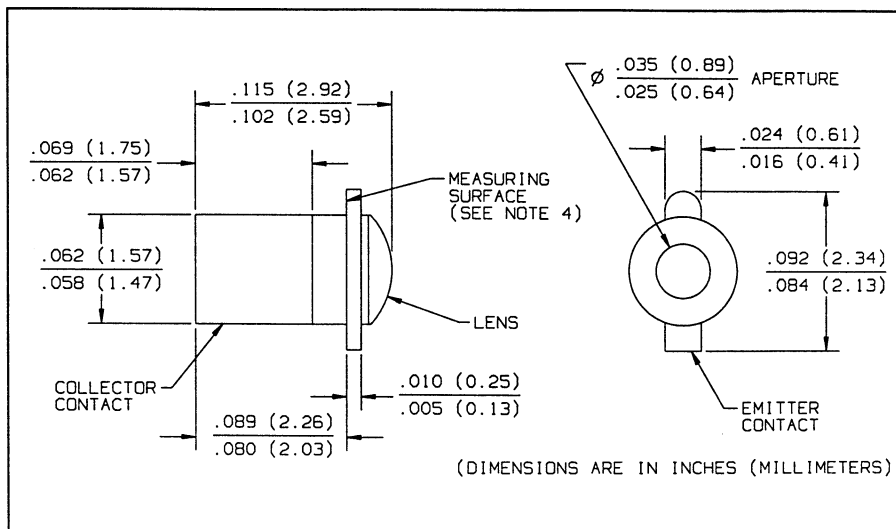


# PN Junction Silicon Photodiode Type OP900SL



## Features

- Narrow receiving angle
- Enhanced temperature range
- Ideal for direct mounting in PC boards
- Fast switching speed
- Mechanically and spectrally matched to the OP123 series emitters
- Linear response vs. irradiance

## Description

The OP900SL consists of a PN junction silicon photodiode mounted in a miniature, glass lensed, hermetically sealed "Pill" package. The lensing effect allows an acceptance half angle of  $18^\circ$  measured from the optical axis to the half power point.

## Replaces

OP900 series

## Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

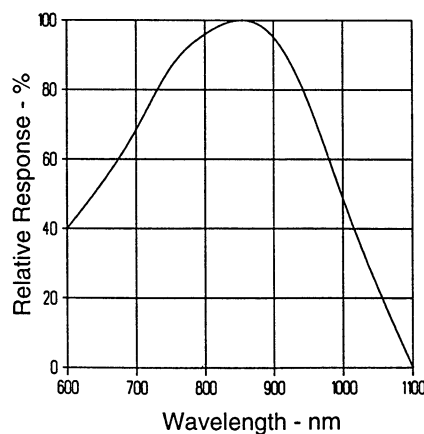
Reverse Voltage	100 V
Storage Temperature Range	$-65^\circ\text{C}$ to $+150^\circ\text{C}$
Operating Temperature Range	$-65^\circ\text{C}$ to $+125^\circ\text{C}$
Soldering Temperature (5 sec. with soldering iron)	$260^\circ\text{C}^{(1)}$
Power Dissipation	$50\text{ mW}^{(2)}$

### Notes:

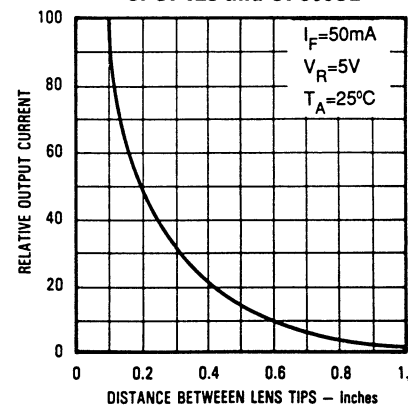
- (1) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
- (2) Derate linearly  $0.5\text{ mW}/^\circ\text{C}$  above  $25^\circ\text{C}$ .
- (3) Junction temperature maintained at  $25^\circ\text{C}$ .
- (4) Light source is an unfiltered tungsten bulb operating at  $CT = 2870\text{ K}$  or equivalent infrared source.

## Typical Performance Curves

Typical Spectral Response



Coupling Characteristics of OP123 and OP900SL



# Type OP900SL

Electrical Characteristics ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$I_L$	Light Current	8.0	14.0		$\mu\text{A}$	$V_R = 10\text{ V}$ , $E_e = 20\text{ mW/cm}^2$ <sup>(3)(4)</sup>
$I_D$	Dark Current			10	nA	$V_R = 10\text{ V}$ , $E_e = 0$ <sup>(3)</sup>
$V_{(BR)R}$	Reverse Voltage Breakdown	100	150		V	$I_R = 100\ \mu\text{A}$
$t_r$	Rise Time		100		ns	$V_R = 50\text{ V}$ , $I_L = 8\ \mu\text{A}$
$t_f$	Fall Time		100		ns	$R_L = 1\ \text{k}\Omega$ , See Test Circuit

## Typical Performance Curves

