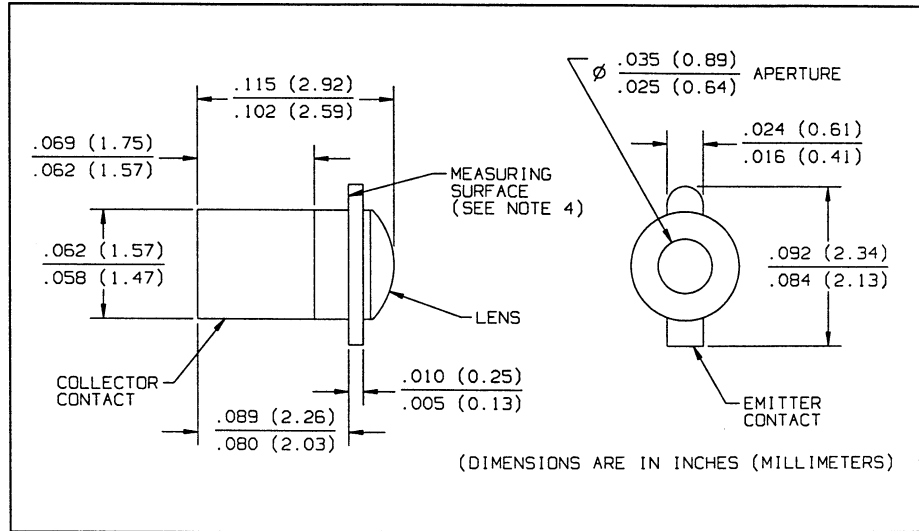
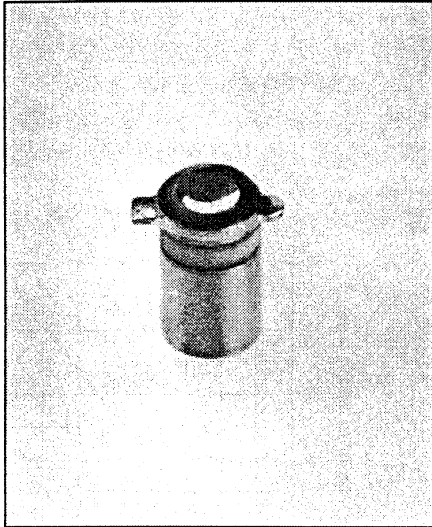


# PN Junction Silicon Photodiode Type OP900SL



## 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° 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)

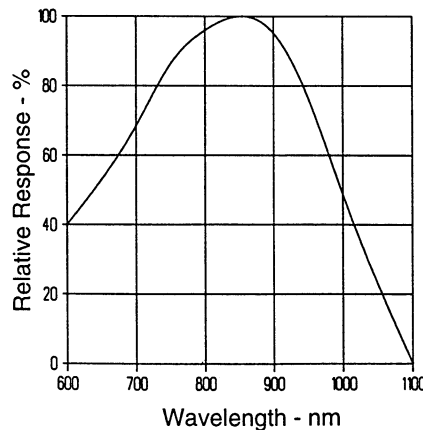
Reverse Voltage .....	100 V
Storage Temperature Range .....	-65° C to +150° C
Operating Temperature Range .....	-65° C to +125° C
Soldering Temperature (5 sec. with soldering iron) .....	260° C <sup>(1)</sup>
Power Dissipation .....	50 mW <sup>(2)</sup>

### Notes:

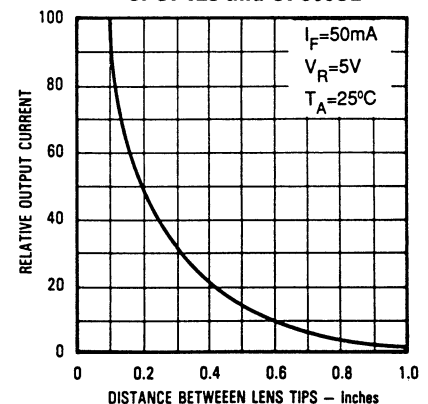
- (1) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
- (2) Derate linearly 0.5 mW/° C above 25° C.
- (3) Junction temperature maintained at 25° C.
- (4) Light source is an unfiltered tungsten bulb operating at  $CT = 2870 \text{ K}$  or equivalent infrared source.

## 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		$\mu\text{A}$	$V_R = 10\text{ V}$ , $E_e = 20\text{ mW/cm}^2(3)(4)$
$I_D$	Dark Current			10	nA	$V_R = 10\text{ V}$ , $E_e = 0^{(3)}$
$V_{(BR)R}$	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

