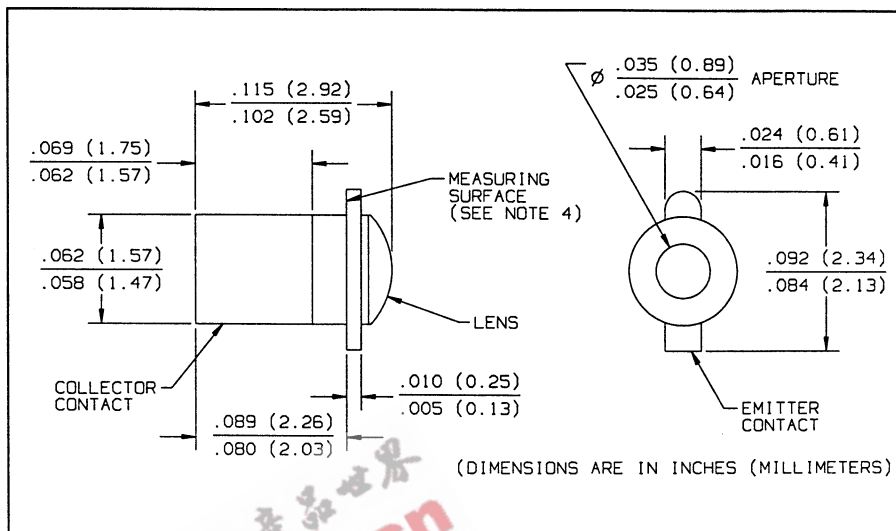


PN Junction Silicon Photodiode Type OP900SL



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° C unless otherwise noted)

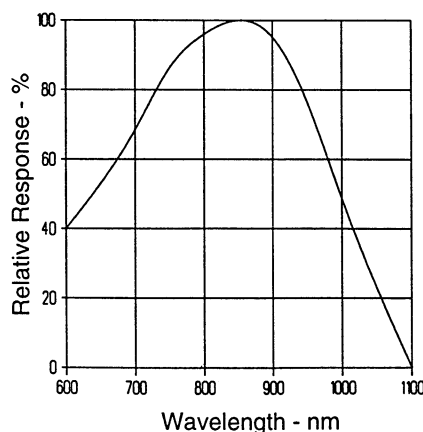
Reverse Voltage	100 V
Storage Temperature Range	-65° C to +150° C
Operating Temperature Range	-65° C to +125° C
Soldering Temperature (5 sec. with soldering iron)	260° C ⁽¹⁾
Power Dissipation	50 mW ⁽²⁾

Notes:

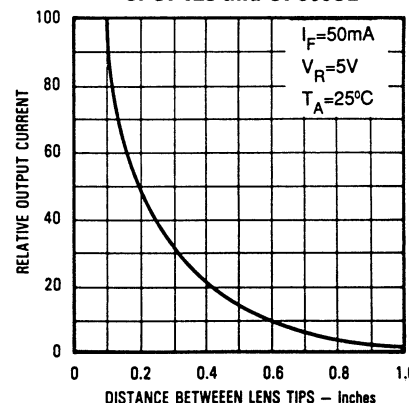
- (1) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
- (2) Derate linearly 0.5 mW/° C above 25° C.
- (3) Junction temperature maintained at 25° C.
- (4) Light source is an unfiltered tungsten bulb operating at CT = 2870 K or equivalent infrared source.

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		μA	$V_R = 10\text{ V}$, $E_e = 20\text{ mW/cm}^2$ ⁽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

