



## DESCRIPTION

The SLSD-71N100 is a solderable planar photodiode featuring low cost, high reliability, and linear short circuit current over a wide range of illumination. These devices are widely used for light sensing and power generation because of their stability and high efficiency. They are particularly suited to power conversion applications due to their low internal impedance, relatively high shunt impedance, and stability. The photodiodes have a protective coating that protects them from humidity effects. The electrical characteristics below are per element. In the multi-element arrays the cathodes are common to a single cathode wire.

## RELIABILITY

This API high-reliability detector is in principle able to meet military test requirements (Mil-STD-750, Mil-STD-883) after proper screening and group test.

Contact API for recommendations on specific test conditions and procedures.

## FEATURES

- Visible to IR spectral irradiance range
- High reliability
- Oxide passivation
- Linear short circuit current
- Low capacitance, high speed
- Si surface protected with a thin film coating
- Available in arrays

## APPLICATIONS

- Light sensing
- Power generation

## ABSOLUTE MAXIMUM RATINGS

Operating Temperature	-40	to	+105	°C	non condensing
Storage Temperature	-40	to	+105	°C	
Soldering Temperature			+240	°C	
Wavelength Range	400	to	1100	nm	

**OPTO-ELECTRICAL PARAMETERS**

$T_a = 23^\circ\text{C}$  unless noted otherwise

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Short Circuit Current	$V_R = 0\text{V}$ , $E_e = 25\text{mW/cm}^2$ **	0.3	0.4	-	mA
Open Circuit Voltage	$E_e = 25\text{mW/cm}^2$ **	-	0.40	-	V
Dark Current	$V_R = 5\text{V}$ , $E_e = 0$ , $T = 25^\circ\text{C}$	-	-	1.7	$\mu\text{A}$
Junction Capacitance	$V_R = 0\text{V}$ , $E_e = 0$ , $f = 1\text{MHz}$	-	0.4	-	nF
Spectral Sensitivity	$\lambda = 940\text{nm}$ ; Flood illumination*	-	0.55	-	A/W
Breakdown Voltage	$I_R = 100\mu\text{A}$	20	-	-	V
Maximum Sensitivity Wavelength	-	-	930	-	nm
Acceptance Half Angle	(off center-line)	-	60	-	deg

\* Minimum 50% of active area illuminated

\*\* Light source @ 2854°K

**TYPICAL PERFORMANCE**

**DIRECTIONAL SENSITIVITY**

