



DESCRIPTION

This optocoupler, **NSL-32SR3**, consists of an LED input optically coupled to a photocell. The photocell resistance is high when the LED current is “off” and low resistance when the LED current is “on”.

RELIABILITY

This Luna 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 Luna for recommendations on specific test conditions and procedures.

FEATURES

- Compact, moisture resistant package
- Very low “on” resistance
- Low LED current
- Passive resistance output

APPLICATIONS

- Industrial

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN		MAX	UNITS	(TA)= 23°C UNLESS OTHERWISE NOTED
Isolation Voltage	-	-	2000	V	-
Operating Temperature	-40	to	+75	°C	-
Storage Temperature	-40	to	+75	°C	-
Soldering Temperature ²	-	-	+260	°C	-

NOTE:

1. 2 mm from case for <5 sec.
2. Derate linearly to 0 at 75°C
3. The Rise Time, TR, is the time required for the dark to light change in conductance to reach 63% of its final value.
4. Measured after 1 minute ON @ IF =20mA followed by 10 sec. OFF.
5. Print “**NSL-32SR3**” and date code **YYWW**.

OPTO-ELECTRICAL PARAMETERS

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
LED					
Forward Current	-	-	-	25	mA
Forward Current	$I_F = 20\text{mA}$	-	-	2.5	V
Reverse Current	$V_R = 4\text{V}$	-	-	10	μA
CELL					
Maximum Cell Voltage	Peak AC or DC	-	-	60	V
Power Dissipation	²	-	-	50	mW
COUPLED					
ON Resistance	$I_F = 20\text{mA}$	-	-	60	Ω
ON Resistance	$I_F = 50\text{mA}$	-	150	-	Ω
Off Resistance	10 sec after $I_F = V - 0.5\text{Vdc}$ on cell	25	-	-	$\text{M}\Omega$
Rise Time	Time to 63% of final conductance $I_F = 5\text{mA}$		5	-	msec
Decay Time	Time to 100K Ω after removal of $I_F = 5\text{mA}$		10	-	msec
Cell Temp. Coefficient	$I_f > 5\text{mA}$	-	0.7	-	%/K

NOTE:

1. 2 mm from case for <5 sec.
2. Derate linearly to 0 at 75°C
3. The Rise Time, T_R , is the time required for the dark to light change in conductance to reach 63% of its final value.
4. Measured after 1 minute ON @ $I_F = 20\text{mA}$ followed by 10 sec. OFF.
5. Print "NSL-32SR3" and date code YYWW.

TYPICAL PERFORMANCE

PHOTOCELL RESISTANCE vs. LED CURRENT

