



**DESCRIPTION**

This series of optocoupler consists of an LED input optically coupled to a photocell. The photocell resistance is high when the LED current is “off” and low when the LED current is “on”. These optocouplers are mounted on a lead spacer platform that facilitates mounting on a PCB. The different “on” resistance ranges are shown in table below.

**RELIABILITY**

CdS/CdSe photo resistors are temperature sensitive, it should be noted that operation of the photocell above +75°C does not usually lead to catastrophic failure but the photoconductive surface may be damaged leading to irreversible changes in sensitivity

Contact Luna for recommendations on specific test conditions and procedures.

**ABSOLUTE MAXIMUM RATINGS**

SYMBOL	MIN		MAX	UNITS	
Isolation Voltage	-	-	2000	V	T <sub>a</sub> = 23°C UNLESS OTHERWISE NOTED
Operating Temperature	-40	to	+75	°C	non condensing
Storage Temperature	-40	to	+75	°C	-
Soldering Temperature	-	to	+260	°C	>0.05” from case for <5 sec.

**FEATURES**

- Compact, moisture resistant package
- Low LED current
- Passive resistance output

**APPLICATIONS**

- Industrial sensing

**OPTO-ELECTRICAL PARAMETERS**

T<sub>a</sub> = 23°C UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>LED</b>					
Forward Current	-	-	-	40	mA
Forward Voltage	I <sub>f</sub> = 20 mA	-	-	2.0	V
Reverse Current	V <sub>R</sub> = 4V	-	-	100	μA
<b>CELL</b>					
Maximum Cell Voltage	(Peak AC or DC)	-	-	60	V
Power Dissipation	(1)	-	-	50	mW
<b>COUPLED</b>					
On Resistance	I <sub>f</sub> = 1 mA, (3)	-	-	-	-
<b>NSL-32H-101</b>		-	-	750	Ω
<b>NSL-32H-102</b>		0.75	-	0.96	KΩ
<b>NSL-32H-103</b>		0.96	-	1.65	KΩ
<b>NSL-32H-104</b>		1.65	-	2.80	KΩ
Off Resistance	10 sec after I <sub>f</sub> = 0 mA, 4V dc on cell	500	-	-	KΩ
Rise Time	Time to 63% of final conductance @ I <sub>f</sub> = 16mA	-	3.5	-	msec.
Decay Time	Time to reach 100 KΩ after removal of I <sub>f</sub> = 16 mA	-	-	500	msec.
Cell Temp. Coefficient	I <sub>f</sub> > 5 mA	-	1.0	-	%/°C

NOTE:

1. Derate linearly to 0 at 75°C
2. Spacer color is un-defined.
3. Measured after a dark history of 1 week.
4. Print "NSL-32H-1XX" and date code "YYWW"