



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	$T_a = 23^{\circ}\text{C}$ UNLESS OTHERWISE NOTED
Operating Temperature	-40	to	+75	$^{\circ}\text{C}$	non condensing
Storage Temperature	-40	to	+75	$^{\circ}\text{C}$	-
Soldering Temperature	-	to	+260	$^{\circ}\text{C}$	>0.05" from case for <5 sec.

FEATURES

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

APPLICATIONS

- Industrial sensing

OPTO-ELECTRICAL PARAMETERS

$T_a = 23^{\circ}\text{C}$ UNLESS NOTED OTHERWISE

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
LED					
Forward Current	-	-	-	40	mA
Forward Voltage	$I_f = 20 \text{ mA}$	-	-	2.0	V
Reverse Current	$V_R = 4\text{V}$	-	-	100	μA
CELL					
Maximum Cell Voltage	(Peak AC or DC)	-	-	60	V
Power Dissipation	(1)	-	-	50	mW
COUPLED					
On Resistance	$I_f = 1 \text{ mA}, (3)$	-	-	-	-
NSL-32H-101		-	-	750	Ω
NSL-32H-102		0.75	-	0.96	K Ω
NSL-32H-103		0.96	-	1.65	K Ω
NSL-32H-104		1.65	-	2.80	K Ω
Off Resistance	10 sec after $I_f = 0 \text{ mA}$, 4V dc on cell	500	-	-	K Ω
Rise Time	Time to 63% of final conductance @ $I_f = 16\text{mA}$	-	35	-	msec.
Decay Time	Time to reach 100 K Ω after removal of $I_f = 16 \text{ mA}$	-	-	500	msec.
Cell Temp. Coefficient	$I_f > 5 \text{ mA}$	-	1.0	-	%/ $^{\circ}\text{C}$

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"