



NSL-5150

Light Dependent Resistor (LDR) CdS Photocell

The NSL-5150 is a Type 5 CdS photoresistor photocell in a flat lens TO-18 package.

Advanced Photonix's CdS Photocells are photoresistor cells for visible light measurement designed to sense light from 400 to 700 nm. Their resistance decreases as the light level increases with efficiency characteristics similar to the human eye. These Light Dependent Resistors (LDR) are available in a wide range of resistance values. They are available in a two-leaded plastic-coated ceramic header or hermetically sealed TO metal cans.

Applications

- Industrial
- Audio Compressors
- Night Lights
- Photography Light Meters
- Solar Street Lights
- Flame Detection

Features

- Passive Resistance output
- Hermetically Sealed
- Available in a two-leaded ceramic package
- Available in a wide range of resistance values

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Voltage	V_R	-	60	V
Power Dissipation*	-	-	50	mW
Operating Temperature	T_{OP}	-40	+75	°C
Storage Temperature	T_{STG}	-55	+75	°C
Package	TO-18			

*Derate linearly to zero at 75°C

Typical Electro-Optical Specifications at $T_A=23\text{ °C}$

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Light Resistance	1ftc., 2854 °K	R_L	10	15	20	KΩ
	100 ftc., 2854 °K	R_L	-	400	-	KΩ
Dark Resistance	5 Sec. after removal of test light	R_D	10	-	-	MΩ
Spectral Application Range	-	λ	-	550	-	nm
Rise Time	Time to reach 63% of its saturation value after the photocell is illuminated.	T_R	-	55	-	ms
Fall Time	Time to decay to 37% of its saturation value (~100K ohm) after the lights is removed	T_F	-	20	-	ms

*Cells light adapted at 30 to 50 ftc for 16 hrs minimum prior to electrical tests.

Mechanical Specifications

Units are in inches [mm]

