PDV-P9008

Light Dependent Resistor CdS Photocell

The PDV-P9008 is a Light Dependent Resistor (LDR) with sensitivity in the visible light region. The photoresistor cell is packaged in 2-pin leaded plastic-coated ceramic header.

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-pin leaded plastic-coated ceramic headers and hermetically sealed TO metal cans.

Applications

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

Features

- Visible Light Response
- Sintered Construction
- Passive Resistance output
- Two-pin leaded ceramic package
- Available in in hermetically sealed package
- Available in a wide range of resistance values

Absolute Maximum Ratings

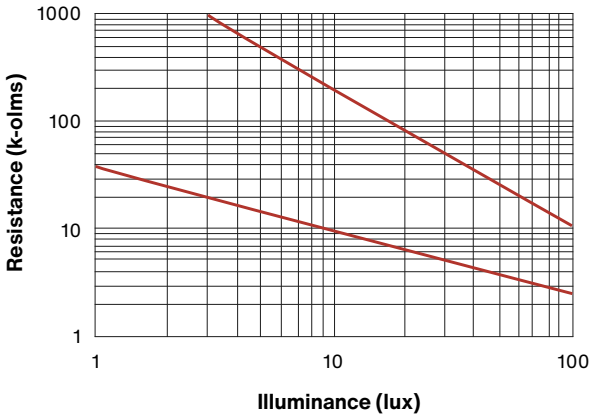
Parameter	Symbol	Min	Max	Unit
Voltage	V_R	-	150	V
Wavelength Range	-	400	700	nm
Power Dissipation	-	-	125	mW
Operating Temperature	T_{OP}	-25	+75	°C
Storage Temperature	T_{STG}	-25	+75	°C
Package	Ceramic			

Typical Electro-Optical Specifications at T_A=23 °C

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Dark Resistance	After 10 sec. @10 Lux @ 2856 °K	R_D	20	-	-	MΩ
Illuminated Resistance	10 Lux @ 2856 °K	R_{IL}	10	-	200	KΩ
Sensitivity	$\frac{\text{Log (R100) - Log (R10)**}}{\text{Log (E100) - Log (E10) ***}}$	S	-	0.85	-	Ω/Lux
Spectral Application Range	Flooded	λ	400	570	700	nm
Rise Time	10 Lux @ 2856 °K	T_R	-	60	-	ms
Fall Time	After 10 Lux @ 2856 °K	T_F	-	25	-	ms

**R100, R10: cell resistances at 100 Lux and 10 Lux at 2856 K respectively.
***E100, E10: luminances at 100 Lux and 10 Lux 2856 K respectively.

Cell Resistance vs Illuminance



Mechanical Specifications

Units are in inches [mm]