PDV-P9001

Light Dependent Resistor (LDR) CdS Photocell

The PDV-P9001 is a Light Dependent Resistor with sensitivity in the visible light region. The CdS photoresistor cell is on a 2-pin ceramic, and the device surface is plastic encapsulated for moisture resistance.

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 can.

Applications

- Camera Exposure
- Shutter Controls
- Night Light Controls
- Audio Compressors
- Solar Street Lights
- Flame Detection

Features

- Visible Light Response
- Sintered Construction
- Two-leaded ceramic package
- Available in a Hermetically sealed package
- Available in a wide range of resistance values

Absolute Maximum Ratings at T_A=23 ºC

Parameter	Symbol	Min	Max	Unit
Voltage	V_R	-	150	V
Continuous Power Dissipation	-	-	100	mW
Operating Temperature	T_{OP}	-25	+100	°C
Storage Temperature	T_{STG}	-55	+125	°C
Package		Ceramic		

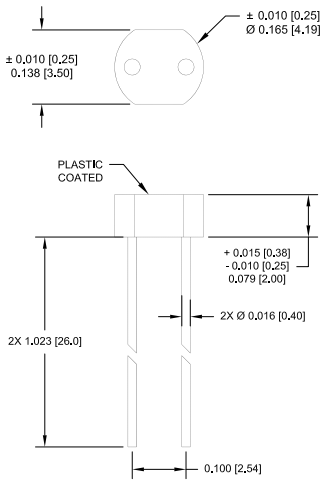
Typical Electro-Optical Specifications at T_A=23 ºC

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Dark Resistance	After 10 sec. @10Lux@2856°K	R_D	0.3	-	-	MΩ
Illuminated Resistance	10Lux@2856°K	R_{IL}	4	-	11	KΩ
Sensitivity	$\frac{\text{Log (R100) - Log (R10)**}}{\text{Log (E100) - Log (E10) ***}}$	S	-	0.65	-	Ω/Lux
Spectral Application Range	Flooded	λ	400	570	700	nm
Rise Time	10Lux@2856°K	T_R	-	60	-	ms
Fall Time	After 10Lux@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.

Mechanical Specifications

Units in inches [mm]



Cell Resistance vs Illuminance