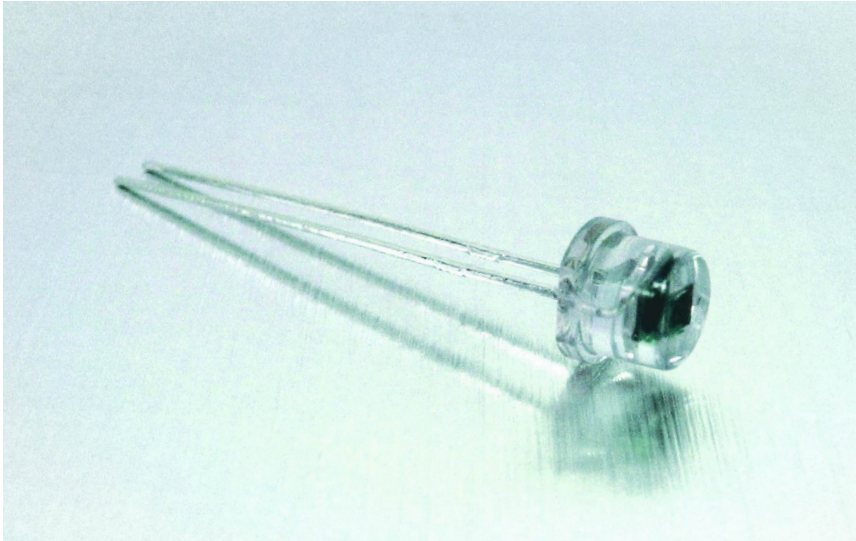


VTP1220FBH

IR Blocking Silicon Photodiode



Description

This VTP processed P on N planar silicon photodiode is housed in a clear, T-1 ¼ flat end-looking package.

These diodes contain an integral IR rejection filter, offering good visual response.

The spectral response is similar to a photocell and to the human eye, making it ideal for applications where the response should only be influenced by visible light.

Features

- Visible light response with an IR blocking filter
- Cadmium free alternative to photocells
- Low dark current
- Low junction capacitance

Applications

- Street light switching
- Contrast control
- Colorimeters
- Camera exposure control

VTP1220FBH IR Blocking Silicon Photodiode

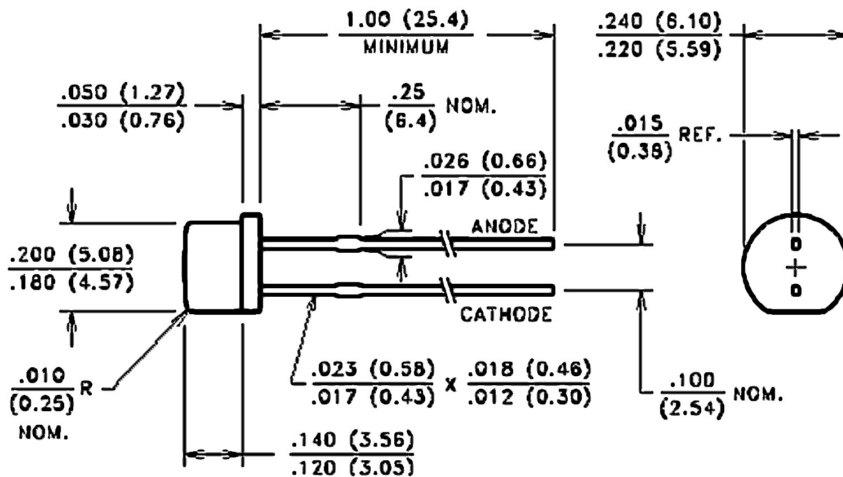
Table 1: Electro-Optical Characteristics @ 25°C

Parameter	Sym	Min.	Typ.	Max.	Units
Short Circuit current @ 100fc, 2850K	I _{sc}	0.7	-	-	μA
Dark Current @ V _R = 10V	I _D	-	-	10	nA
Junction Capacitance @ V _R = 0V, 1MHz	C _J	-	-	18	pF
Open Circuit Voltage @ 100fc	V _{OC}	-	280	-	mV
Peak Spectral Response	λ _{PK}	-	550	-	nm
Sensitivity @ peak	S _R	-	0.27	-	A/W
Angular Response (50% Point)	θ _{1/2}	-	± 70	-	Degrees

Table 2: Absolute Maximum Ratings

Parameter	Sym	Min.	Typ.	Max.	Units
Storage Temperature	T _{ST}	-40	-	85	°C
Operating Temperature	T _{OP}	-40	-	85	°C

Figure 1: Mechanical Characteristics



CASE 26F T-1 3/4 FLAT
 CHIP SIZE: .061 x .077 (1.55 x 1.96)
 TOTAL EXPOSED ACTIVE AREA: .0019 in² (1.219 mm²)

VTP Process Photodiodes

VTP PROCESS FAST RESPONSE, HIGH DARK RESISTANCE

FEATURES

- *Visible to enhanced IR spectral range*
- *Integral visible rejection filters available*
- *Response @ 940 nm, 0.60 A/W, typical*
- *-1 to 2% linearity over 7 to 9 decades*
- *Low dark currents*
- *High shunt resistance*
- *High reverse voltage rating*
- *Low capacitance*

PRODUCT DESCRIPTION

Photodiodes in this series have been designed for low junction capacitance. The lower the capacitance, the faster the response of the diode. Also, speed can be further increased by reverse biasing the diodes which lowers the capacitance even more.

These diodes have excellent response in the IR region and are well matched to IR LEDs. Responsivity is categorized at 940 nm (GaAs LED). Some diodes are available in packages which incorporate a visible rejection filter effectively blocking any light below 700 nm.

Diodes made with the VTP process are suitable for operation under reverse bias conditions but may be used in the photovoltaic mode. Typical reverse breakdown voltages are around 140 V. Low dark currents under reverse bias are also a feature of this series.