

VTP9812FH

IR-Bloc™ Ambient Light Sensor IR-Blocking Silicon Photodiode



The IR-Bloc™ family is the only ambient light sensor family on the market that comes in a low cost package with the IR-blocking feature incorporated in a plastic epoxy package. The spectral response is similar to the human eye and a photocell, making it ideal for applications where the response should only be influenced by the visible light.

As part of the IR-Bloc family of ambient light sensors, the VTP9812FH is a P on N planar Silicon photodiode in a standard flat T-1^{3/4} end-looking package. It offers the time-proven VTP silicon photodiode chip that customers have come to rely upon over the years, with the additional IR blocking feature incorporated in the plastic epoxy package. As such, it offers an excellent response in the visible spectral range.

Key Features

- Visible light response with IR-blocking feature incorporated in the cast epoxy
- RoHS-compliant alternative to photocells
- Low dark current
- Low junction capacitance
- Linear current output vs illumination

Applications

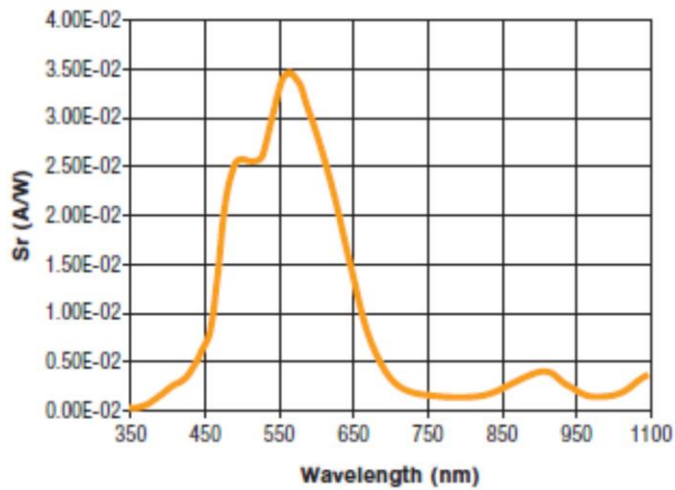
- Street light switching
- Interior and exterior light control (dusk/dawn switch)
- Automotive headlight dimmer
- Contrast control
- Oil burner flame monitoring

IR-Blocking Silicon Photodiode

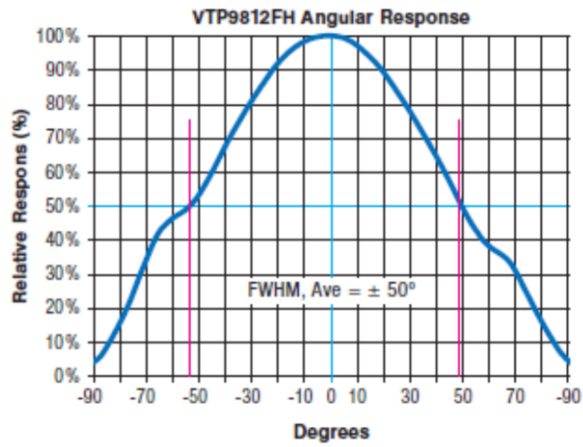
General Characteristics and Electro-optical specifications at 25°C

Parameter	Min	Typical	Max	Units	Conditions
Active area		1.548		mm ²	
Storage Temperature	-40		100	°C	
Operating Temperature	-40		100	°C	
Short Circuit Current	0.7			μA	100fc, 2850K
Dark Current			10	nA	-10V Bias
Junction Capacitance			150	pF	-10V Bias, 1MHz
Open Circuit Voltage		410		mV	100fc, 2850K
Peak Spectral Response		580		nm	
Sensitivity at peak		0.034		A/W	
Angular Response		±50		°	At 50% response
Soldering Temperature			260	°C	5 seconds maximum

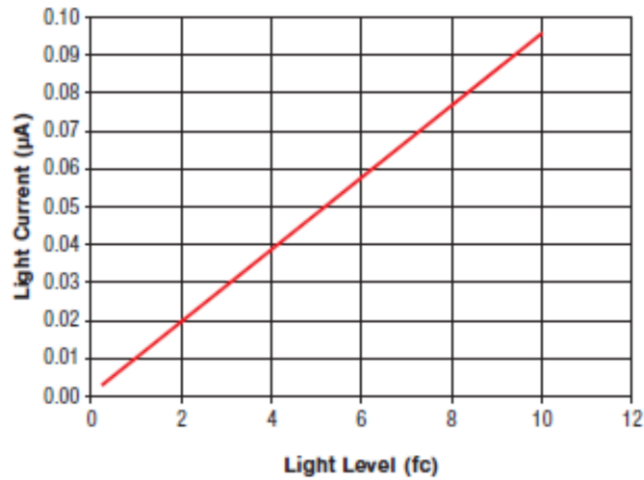
Typical Spectral Sensitivity at 25°C



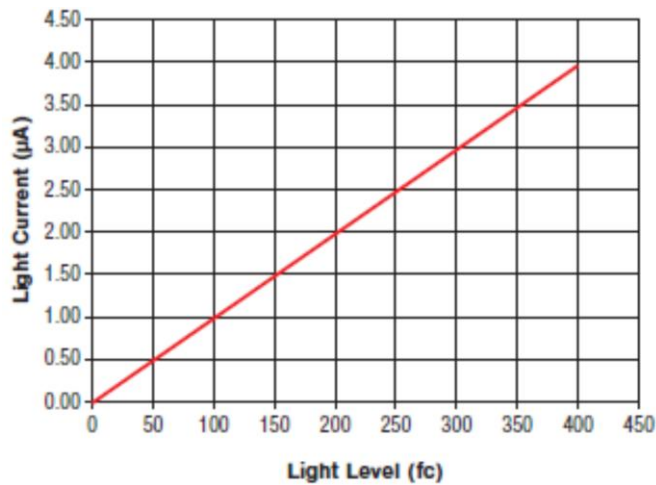
Typical Angular Response



Typical Light Current Output versus Low Light Level



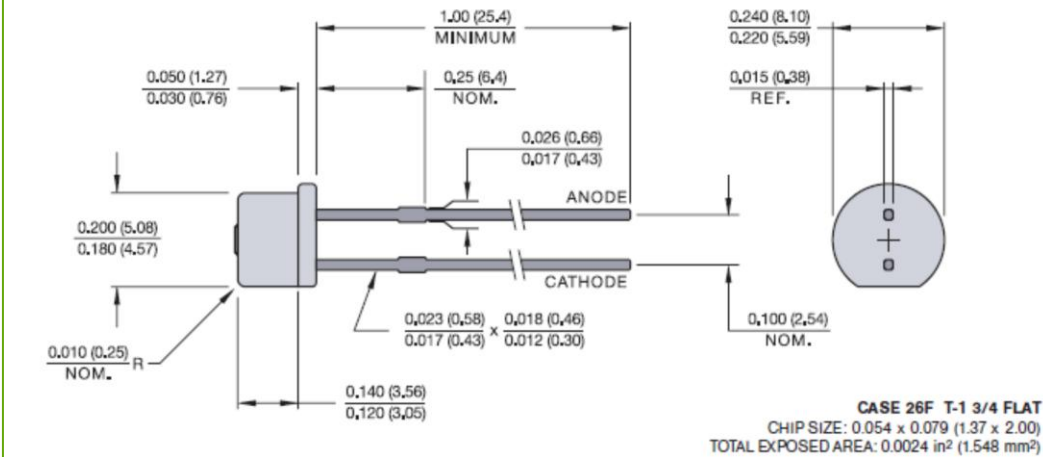
Typical Light Current Output versus Light Level



VTP9812FH

IR-Blocking Silicon Photodiode

Mechanical Characteristics



About Excelitas Technologies

Excelitas Technologies is a global technology leader focused on delivering innovative, customized solutions to meet the lighting, detection and other high-performance technology needs of OEM customers.

From analytical instrumentation to clinical diagnostics, medical, industrial, safety and security, and aerospace and defense applications, Excelitas Technologies is committed to enabling our customers' success in their specialty end-markets. Excelitas Technologies has approximately 3,000 employees in North America, Europe and Asia, serving customers across the world.

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