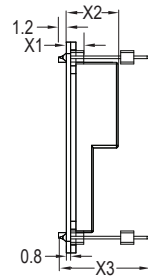
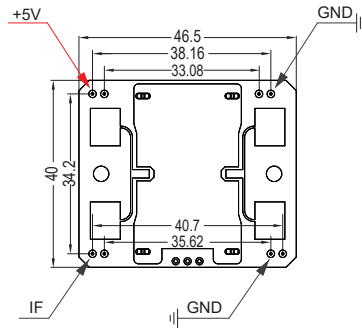


PD-V9H

### SIZE



X1: 3.4mm  
X2: 9.8mm  
X3: customizable  
unit: mm

### FEATURES

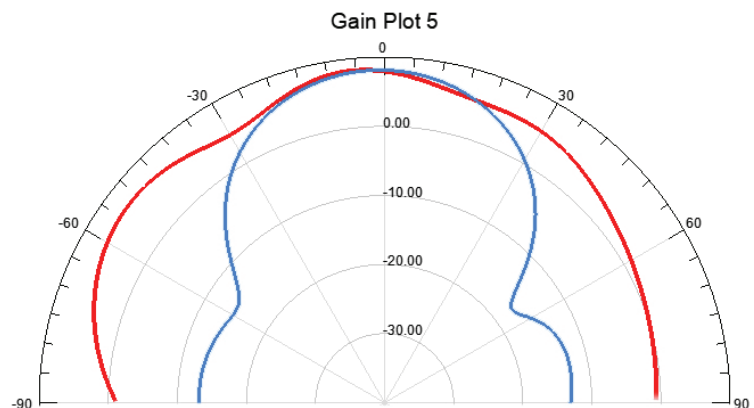
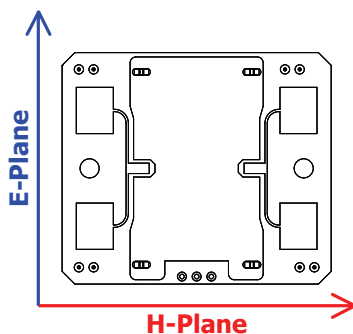
- Frequency Setting: 10.587GHz  $\pm$ 10M
- Including Patch Antenna
- DRO: Dielectric Resonator Oscilato
- Low DC Current Drain
- Small Size
- RoHS Compliance

### SPECIFICATIONS

Item	Specifications	
Frequency Setting	10.587GHz $\pm$ 10M	
Condition	Ta = +25 C, Vin = +5 VDC	
Operating Voltage	+5.0 $\pm$ 0.5 VDC	
Operating Current	<32 mA typ.	
Output Power	20 mW (13 dBm) E.I.R.P. typ.	
Frequency Stability	$\pm$ 5 MHz max. (Ta: -30 to +55 C)	
Return Loss Sensitivity	-90 dBc typ.	
Second Harmonic Emission	-40 dBm range	
Antenna Beamwidth (-3 dB)	E-Plane	36 degree nom. (The oretical full angle of 72 degrees)
	H-Plane	72 degree nom. (The oretical full angle of 144 degrees)
RF Interface	Patch Antenna	
Temperature Range	-30 to +55 C (Standard usage scope), -40 to +80 C (Maximum usage range)	
Regulation for compliance	ETS 300 440	

### RADIATION PATTERN

Radiation Pattern (Reference data)



## BRIEF INTRODUCTION

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The PD-V9 series brightness sensor operates in the X-band. The operating frequency is in the frequency range of 10.525GHz to 10.687GHz. Users need to make purchases based on customize according to the frequency regulations of the country where it is located. For example, 10.525GHz, 10.587GHz, 10.687GHz. The PD-V9 series sensors are widely used in security and surveillance applications products, automatic door sensors, mobile sensing lights, IoT sensors, speed sensors, and various mobile sensor products.

The sensor has H-Plane large angle detection and Eplan small angle detection. Users can fix the sensor at different angles as needed during use. as if users want the working current of the sensor to be as small as possible, you can set the power supply mode of the sensor to PWM (duty cycle) mode, which can effectively reduce the working current.

## POSSIBLE PROBLEMS ENCOUNTERED

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When users encounter the following issues while using or directly replacing the original sensor.

1. First use:

When you are using the PD-V9 series sensor for the first time and encounter high sensitivity or insufficient sensitivity, you should first check the gain setting status of the amplification circuit. And whether the calculation method used by MCU to process signals is appropriate. Generally speaking, it is easy to find a solution.

2. Possible issues that may arise when directly replacing previously used sensors:

When directly replacing previously used sensors, there may also be issues of high sensitivity and low sensitivity, which can be easily resolved. Simply increasing the amplification circuit or decreasing the gain of the amplification circuit is sufficient. No need to consider the signal processing algorithm of MCU.

Help that beginners may need when using:

If you encounter difficulties while using the PD-V9 series sensors and need assistance. You can contact us via email. Generally speaking, answers can be obtained.

### Product Introduction:

**The product introduction may be modified and improved by PDLUX at any time when necessary. Not necessarily will everyone be notified in a timely manner.**

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