VENUSLAB
OPTOELECTRONICS

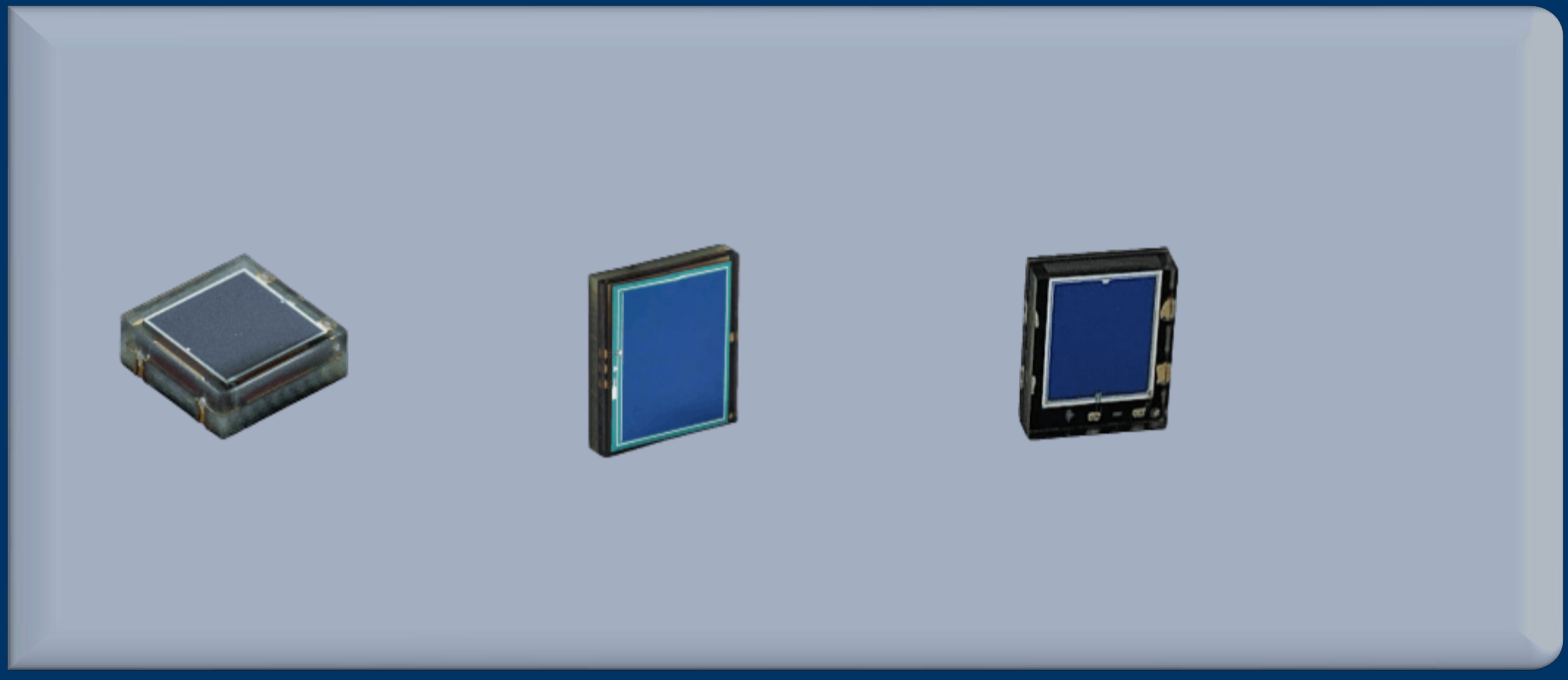
Precision Meets Simplicity

Photodiodes

Ultraviolet-enhanced Silicon PIN Photodiode (COB Package)

Optoelectronic conversion device with enhanced ultraviolet band response and COB package integration.

- High sensitivity in the ultraviolet band
- Strong integration adaptability
- Excellent environmental stability



One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote

Get Expert Advice
+658099 5547（WhatsApp）

Visit Us
www.venuslabtech.com

Ultraviolet-enhanced Silicon PIN Photodiode (COB Package)

Overview

Introduction:

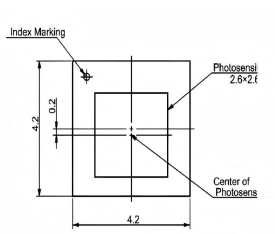
This device has a spectral response range of 320~1060nm, featuring low dark current, low junction capacitance, and optimized response to ultraviolet wavelengths. It adopts COB packaging, which is compatible with lead-free reflow soldering, and is suitable for optical power detection and optical analysis equipment.

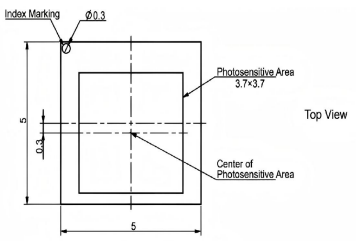
It is used for real-time monitoring of ultraviolet light power density in UV LED curing equipment. The COB package is compatible with lead-free reflow soldering and can be compactly embedded next to the lamp set. It accurately captures the light intensity in the optimized ultraviolet band of 320~400nm. It ensures low-light precision with low dark current and response speed with low junction capacitance. It feeds back data in real-time to adjust the lamp set to avoid curing problems or damage to the substrate.

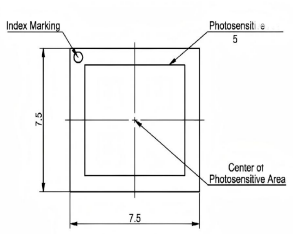
Features:

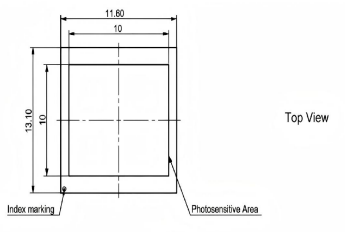
- COB, low thermal resistance for heat transfer control and ultraviolet attenuation
- Lead-free soldering with low ultraviolet attenuation, no calibration required
- Deep ultraviolet dark current suppression ratio ≥ 50:1
- Multi-chip array with small deviation in ultraviolet response

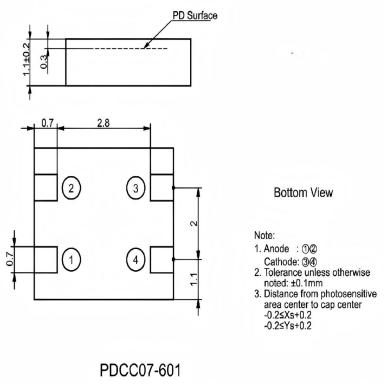
Dimension:



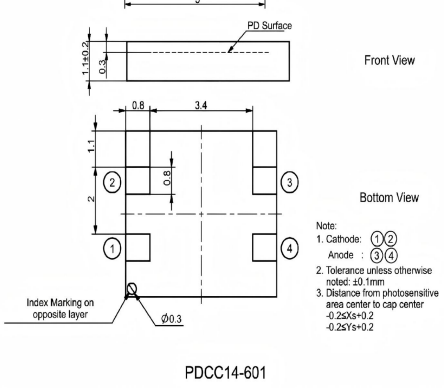




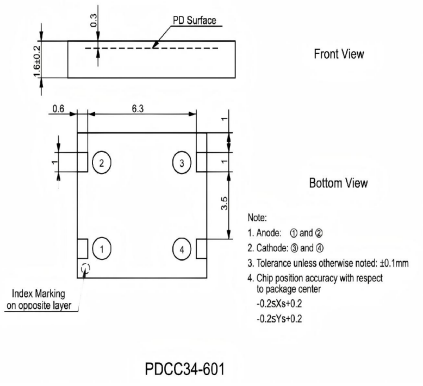




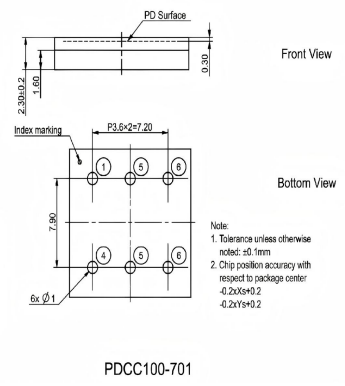
PDCC07-601



PDCC14-601



PDCC34-601



PDCC100-701

Specifications

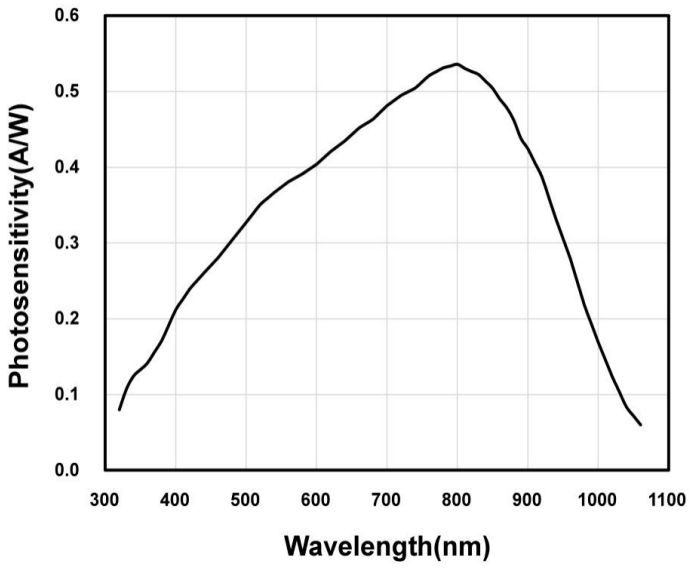
Common Parameter Specification Table

Core Parameter Name	Parameter Value
Spectral Response Range (nm)	320~1060
Package Type	COB
Window Material	Resin
Operating Temperature (°C)	-20 to +80 (No Condensation)
Soldering Temperature (°C)	(<5s) 260
Maximum Reverse Voltage (V)	20
HBM Mode ESD Protection (V)	1000
Peak Response Wavelength (nm)	800

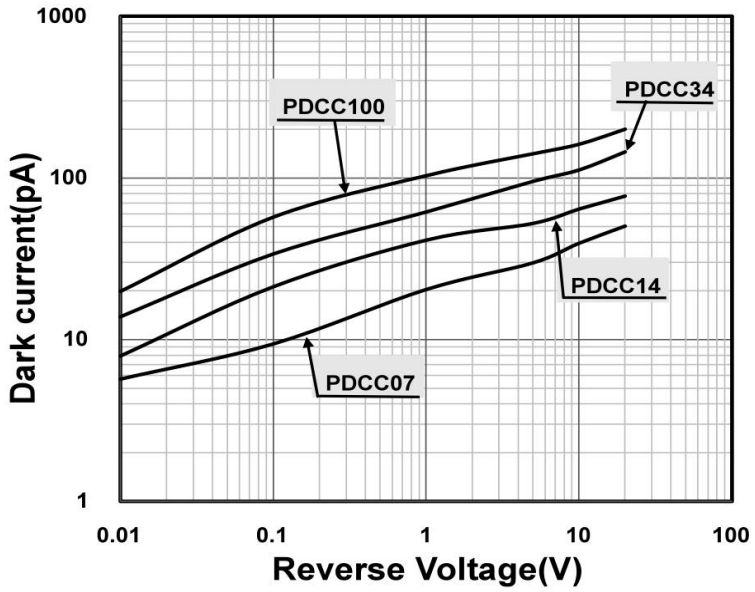
Ultraviolet-enhanced Silicon PIN Photodiode (COB Package)

Applications

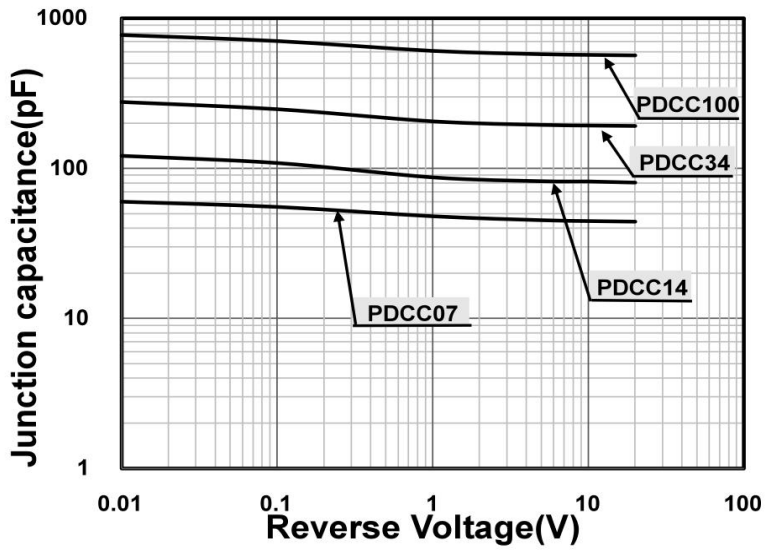
Spectral response



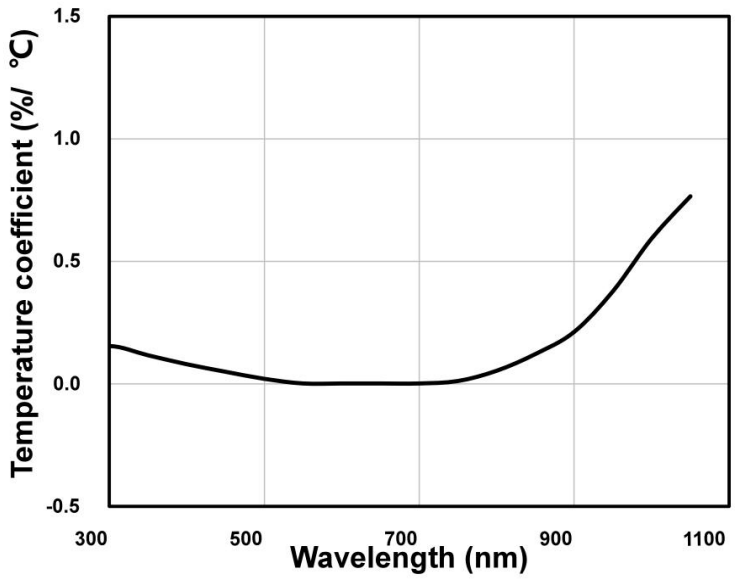
Dark current vs. reverse voltage



Junction capacitance vs. reverse voltage



Photosensitivity temperature characteristics



Explore Series

Model	Dark Current (Max, pA)	Photosensitive Area Size (mm)	Rise Time (μs)	Junction Capacitance (Max, pF)	Equivalent Noise Power ($W/Hz^{1/2}$)	Shunt Resistance (Min, GΩ)
PDCC07-601	30	2.6×2.6	0.14	90	5.3×10^{-15}	0.3
PDCC14-601	60	3.7×3.7	0.26	120	7.5×10^{-15}	0.17
PDCC34-601	300	5.8×5.8	0.7	400	9.2×10^{-15}	0.11
PDCC100-701	800	10×10	1.8	1000	1.2×10^{-14}	0.07

📩 Get in touch with our team to explore configurations,request a quote,or learn more about customized solutionstailored to your needs.

Let us help you moves cience forward—faster and smarter.