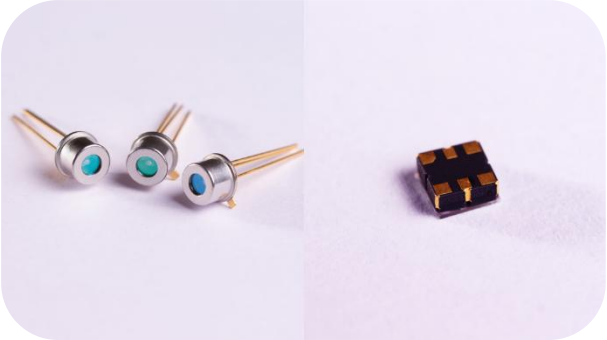
Aura Series – Noiseless InGaAs® APD

Product Brief – 80 µm

Aura

The Aura series of *Noiseless InGaAs®* Avalanche Photodiodes (APDs) are engineered for infrared detection. They have an extremely low excess noise factor and high sensitivity, making them ideal for applications using Time-of-Flight.



Noiseless InGaAs® refers to Phlux's patented compound semiconductor technology, which enables APDs to operate exceeding avalanche gain of 100 without excess noise factor induced degradation of the signal-to-noise ratio (SNR).

Features

- **Spectral response 950 – 1650 nm.**
- **Can be operated at high gain, *M* >100.**
- **Low excess noise factor, *F* <3.5 @ *M* =100.**
- **Low dark current and high sensitivity.**
- **Low temperature coefficient of breakdown voltage (< 20 mV/K).**
- **Fast rise/fall time of impulse response.**
- **RoHS-compliant.**
- **Available in TO-46 and SMD packages, other formats available on request.**

Applications

- **Light Detection and Ranging (LiDAR).**
- **Laser Range Finder (LRF).**
- **Optical Time Domain Reflectometry (OTDR).**
- **Free Space Communication.**
- **Optical / Fiber Sensing**

Devices undergo burn-in to assure high reliability.
Phlux technology is certified to ISO-9001 and the product is designed to meet MIL-STD-883 specifications.

Phlux Technology Ltd
Pennine Five Campus, Block 5, Level 2, 18 Hawley Street, Sheffield, S1 4WP, UK
Company Number: 12908876

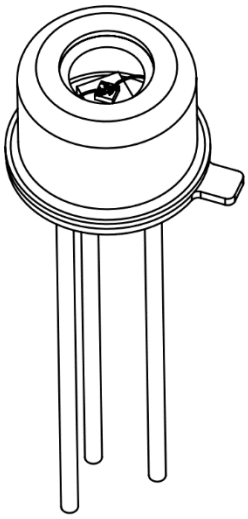
1. Package Mechanical Dimensions

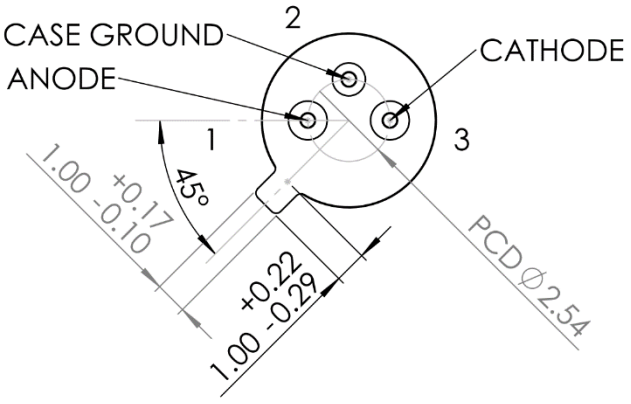
TO-46 3 PIN (HIGH PROFILE)

Diagram units in mm

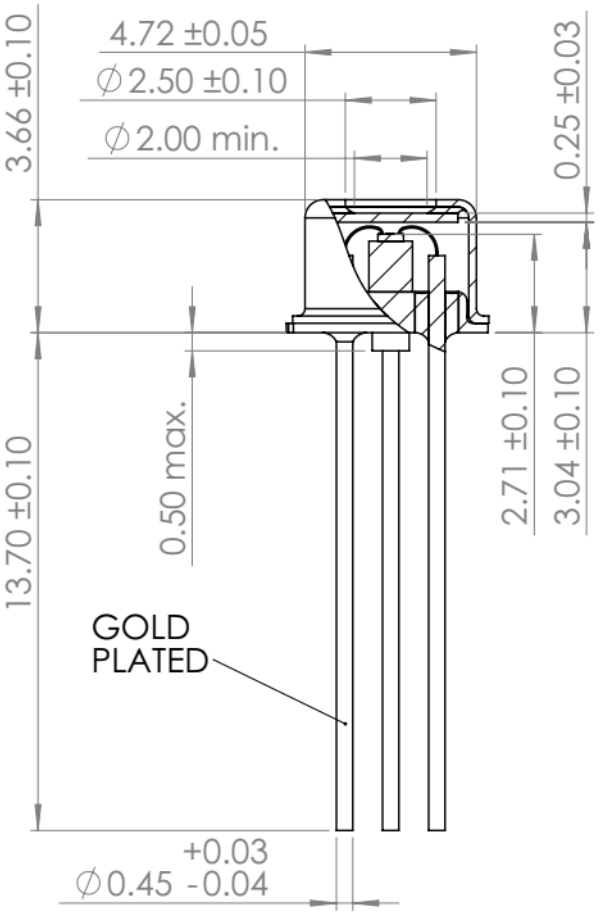
Pin metal: Gold plated.

Optical window AR coated with > 98% transmission from 1050 to 1650 nm.





Bottom view

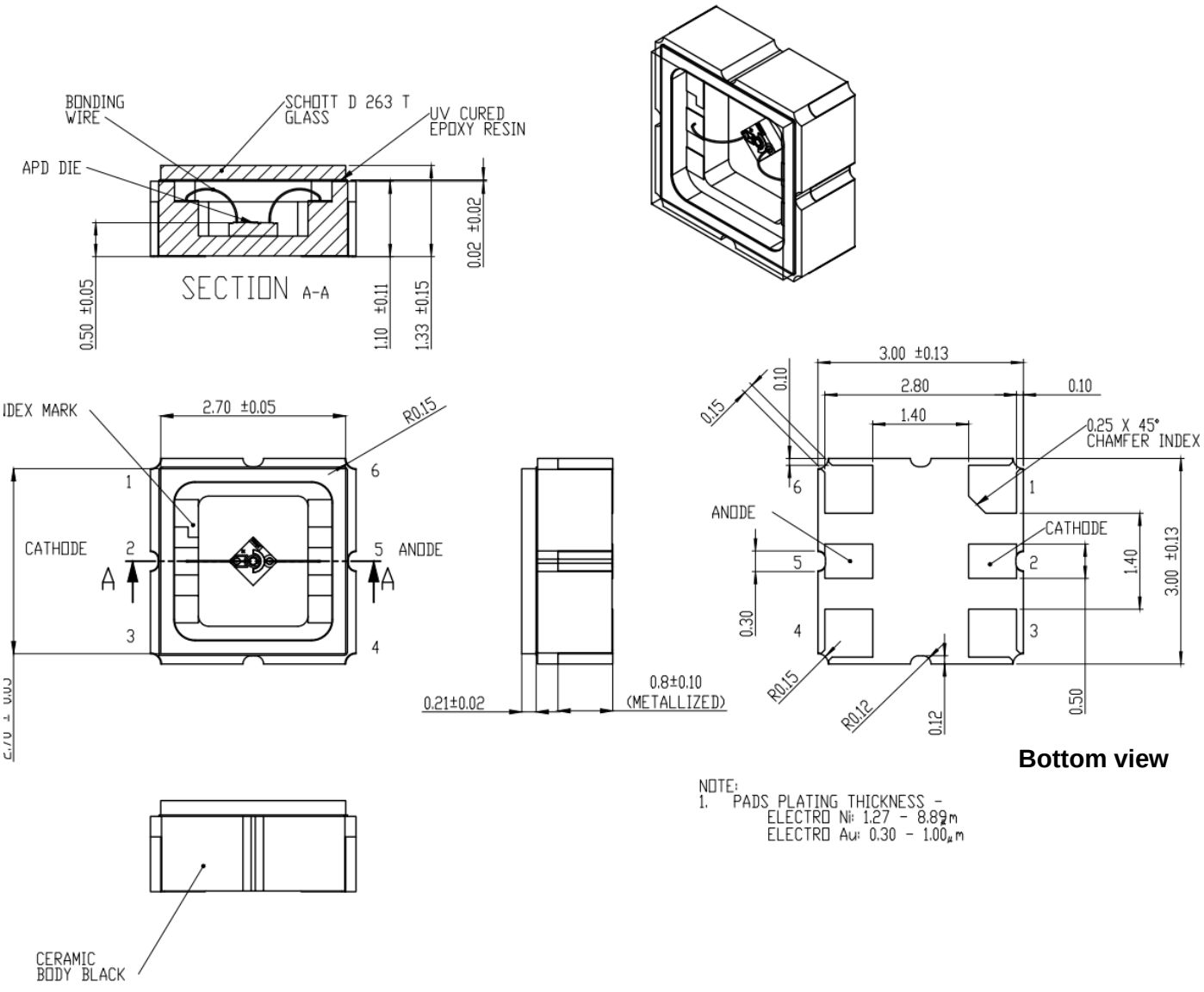


Surface-Mount Device (SMD)

Diagram units in mm

Optical window AR coated with > 98% transmission from 1050 to 1650 nm.

Pin 1, 3, 4, 6 are not connected (NC) electrically - can be used as mechanical PCB connection.



2. Ordering Information

Part Number	Package	Description	MoQ
PX01080-TO	TO-46	APD in TO-46	
PX01080-SM	SMD	APD in SMD	

Contact sales for bare die, chip on sub-mount and fibre pigtailed package options.

3. Phlux Technology Address and Contact Details

Phlux Technology Worldwide Headquarters:

Phlux Technology Ltd
Pennine Five Campus,
Block 5, Level 2,
18 Hawley Street,
Sheffield S1 4WP,
United Kingdom.

Tel: +44 (0)114 308 2086

Email: connect@phluxtechnology.com

Phlux Technology Ltd.

Specifications and descriptions are subject to change without prior notice.

4. Disclaimer

This document does not transfer or license any intellectual property rights to the user.

Phlux Technology Ltd assumes no liability or warranty for infringement of patent, copyright or other intellectual property rights through the use of this product.

Phlux Technology Ltd assumes no liability for fitness for particular use or claims arising from sales or use of its products.

LIFE SUPPORT POLICY

PHLUX TECHNOLOGY LTD's PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF PHLUX TECHNOLOGY LTD. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labelling, can be reasonably expected to result in a significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.