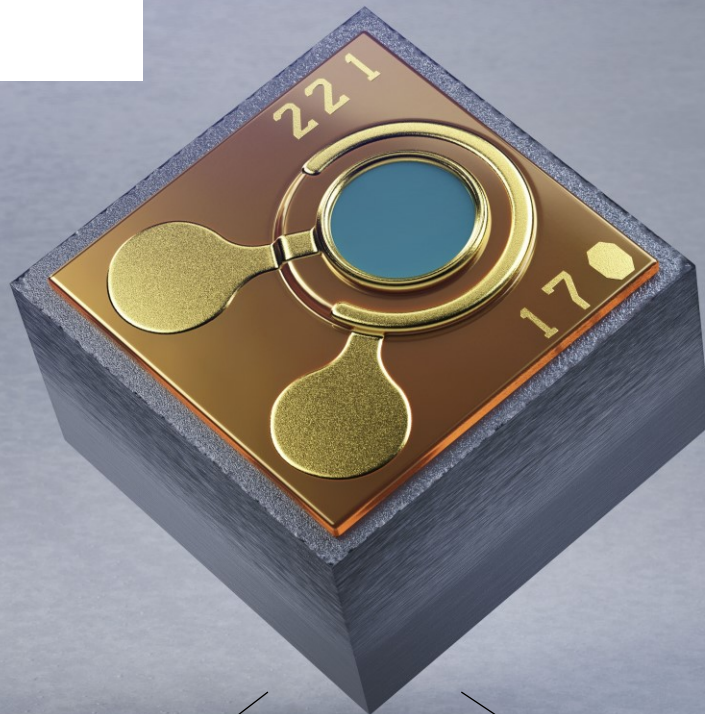


PIN Photodiode

10 Gbps
850 nm



> GaAs PIN
Photodiode

> High speed up to
10 Gbps

> 4 inch wafer

> Low bias voltage

> Low dark current

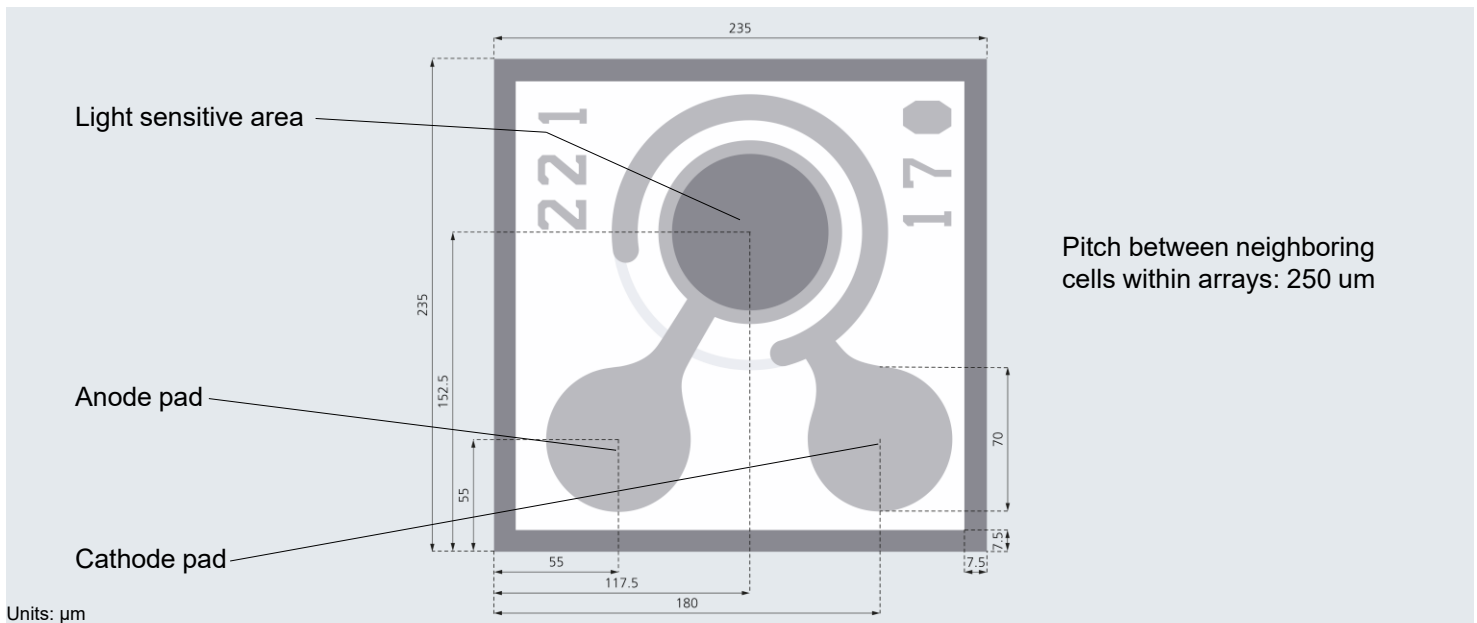
> Available in
1x1, 1x4, 1x12

Datasheet: 10 Gbps 850 nm Photodiode

Electro-Optical Characteristics ($U_{\text{bias}} = -2 \text{ V}$, $T = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Wavelength range	λ	840	850	860	nm	
Substrate temperature	T_s	0	-	90	$^\circ\text{C}$	
Active area diameter	d_{act}	-	70	-	μm	
Small signal bandwidth	$f_{3\text{dB}}$	-	8	-	GHz	50 Ω load
Responsivity	R		0.6		A/W	
Dark current	I_{d1}	-	0.02	0.2	nA	
	I_{d2}			1	μA	$U_{\text{bias}} = -20 \text{ V}$
Capacitance	C		290		fF	50 Ω load

Dimensions



Product variants

Type	Single chip	1 x 4 line array	1 x 12 line array
Part number	TPD-10(01)-850-A0	TPD-10(04)-850-A0	TPD-10(12)-850-A0
Ordering number	ULMPIN-10-TT-N0101U (PD10)	ULMPIN-10-TT-N0104U (PD10)	ULMPIN-10-TT-N0112U (PD10)
Dimensions	235 x 235 x 150 μm	235 x 985 x 150 μm	235 x 2985 x 150 μm
Wiring		Electrically separated channels	Electrically separated channels

For more information visit
www.trumpf.com/s/VCSEL-solutions

Safety information:



Electrostatic sensitive devices / observe precautions for handling

TRUMPF Photonic Components GmbH

Lise-Meitner-Straße 13 · 89081 Ulm · Germany

E-mail: photonic.components@trumpf.com · Homepage: www.trumpf.com/s/VCSEL-solutions

February 2023

