PIN Photodiode

56 Gbps PAM4
28 Gbps NRZ
850 nm

- GaAs PIN Photodiode
- High speed up to 56 Gbps PAM4
- 4 Inch Wafer
- Low bias voltage
- Low dark current
- Available in 1x1, 1x4, 1x12

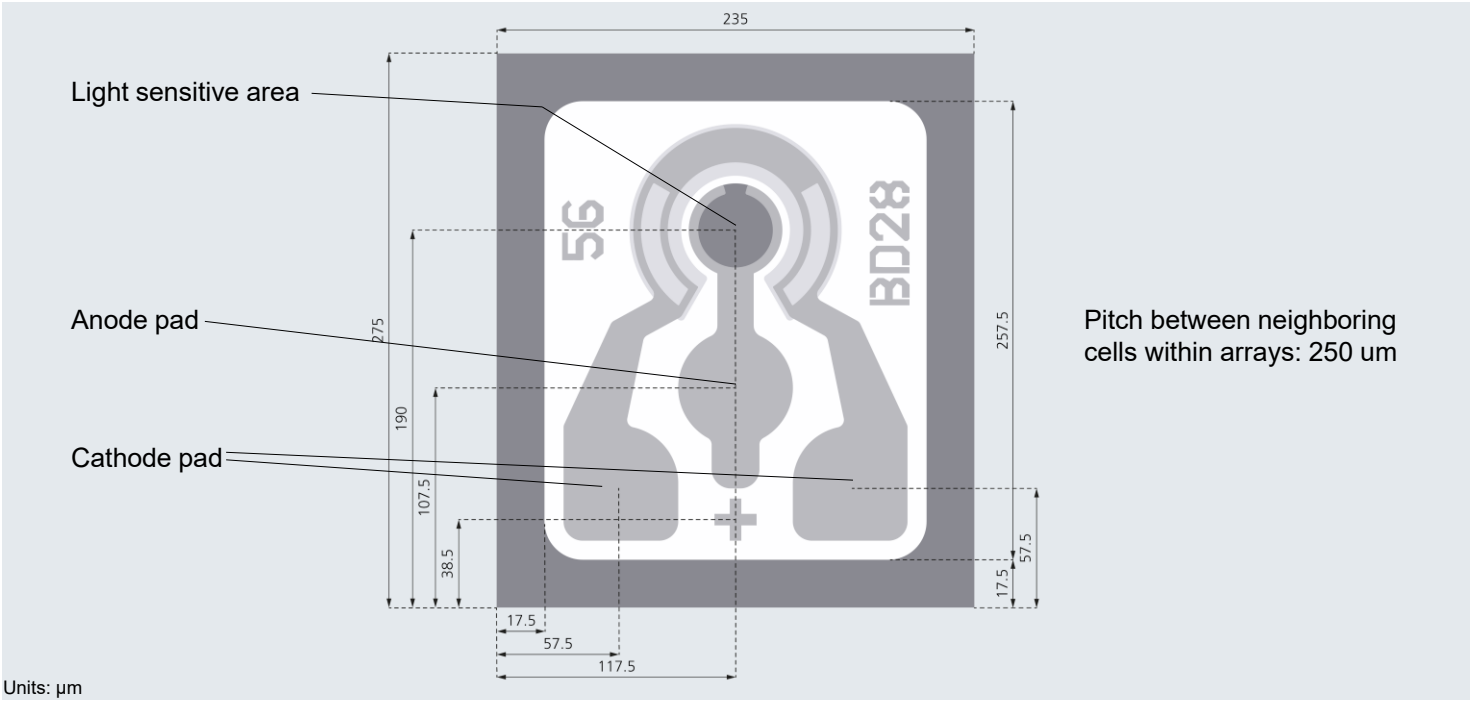
TRUMPF

Datasheet: 56 Gbps (PAM4) 850 nm Photodiode

Electro-Optical Characteristics (U_{bias} = -2 V, T = 25°C unless otherwise stated)

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Wavelength range	λ	840	850	860	nm	
Substrate temperature	Ts	0	-	90	°C	
Active area diameter	d_{act}	-	39	-	µm	
Small signal bandwidth	f_{6dB}	-	20	-	GHz	50 Ω load
Responsivity	R	0.5	0.6	0.7	A/W	Optical input 1 mW
Dark current	Id	-	0.01	1	nA	
Capacitance	C	75	95	115	fF	50 Ω load

Dimensions



Units: µm

Product variants

Type	Single chip	1 x 4 line array	1 x 12 line array
Part number	TPD-56(01)-850-C0	TPD-56(04)-850-C0	TPD-56(12)-850-C0
Ordering number	ULMPIN-56-TT-N0101U	ULMPIN-56-TT-N0104U	ULMPIN-56-TT-N01012U
Dimensions	275 x 235 x 150 µm	275 x 985 x 150 µm	275 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

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