

PIN Photodiode

56 Gbps PAM4
850 nm



High speed up to
56 Gbps PAM4

GaAs PIN
Photodiode

Available in
1x1, 1x4, 1x12

Low bias voltage

Low dark current

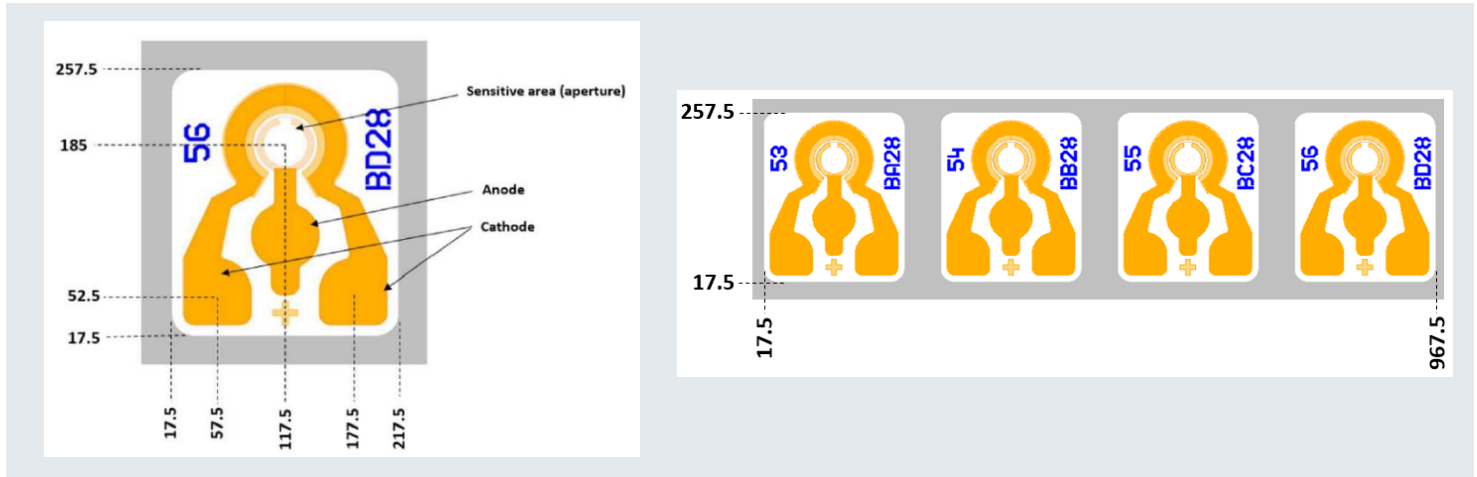
4 inch wafer

Datasheet: 56 Gbps PIN Photodiode

Electro-Optical Characteristics (T = 25°C unless otherwise stated)

Parameter	Symbol	Units	Min	Typ	Max	Test Condition
Wavelength range	λ	nm	840	850	860	
Small signal 6dB bandwidth	f_{6dB}	GHz		20		50Ω load, $U_{bias} = -2V$
Responsivity	R	A/W	0.5	0.6	0.7	Optical input 1 mW
Dark current	I_d	nA	-	-	0.1	$U_{bias} = -2 V$
Capacitance	C	fF	-	95	115	50Ω load, $U_{bias} = -2 V$
Active area diameter	d_{act}	μm		39		

Dimensions of 56G Photodiode:



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:

- Invisible laser radiation / avoid beam exposure / class 3B laser product
- Electrostatic sensitive devices / observe precautions for handling