PIN Photodiode

112 Gbps PAM4
842 nm to 948 nm

- InGaAs PIN Photodiode
- High speed up to 112 Gbps PAM4
- 4 Inch Wafer
- Low bias voltage
- Low dark current
- Available in 1x1, 1x2 and 1x4

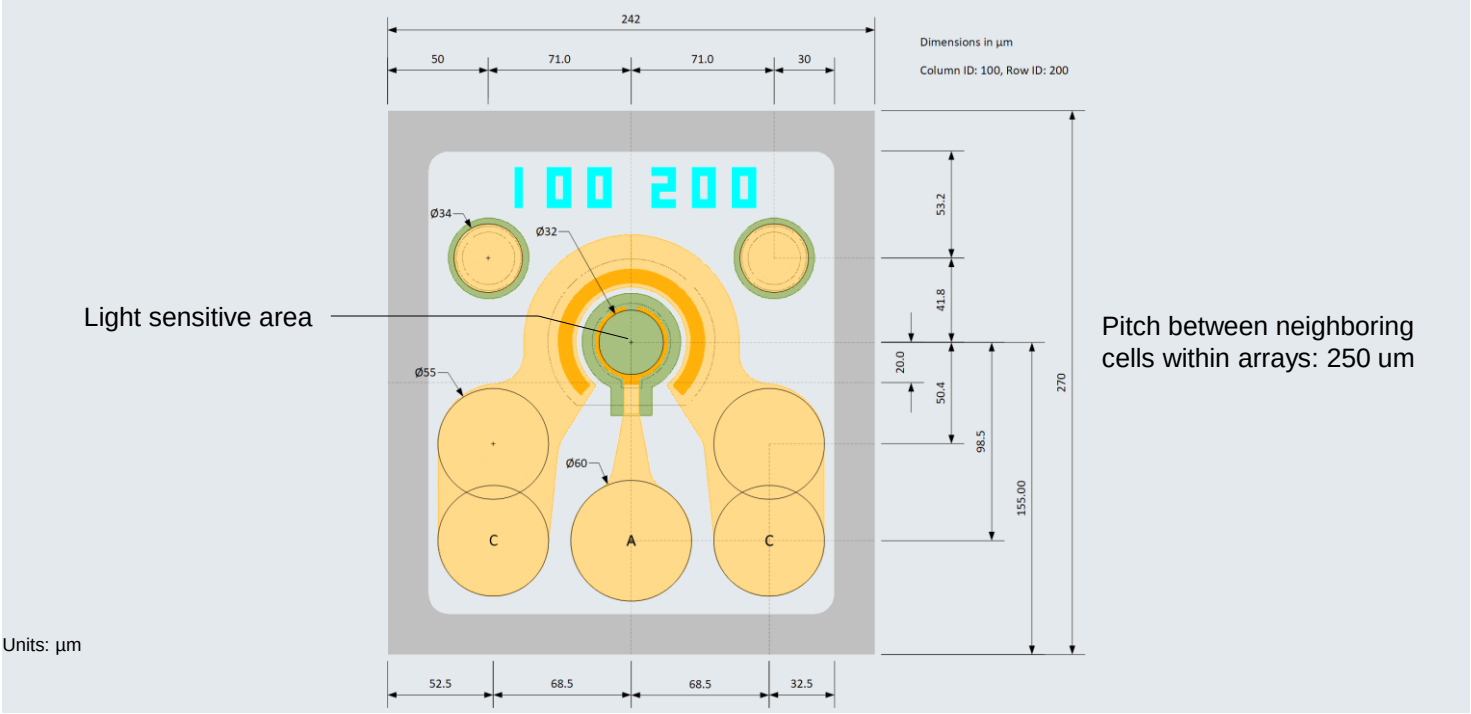
TRUMPF

Datasheet: 112 Gbps PAM4 842 nm to 948 nm PIN Photodiode

Electro-Optical Characteristics (U_{bias} = -2 V, Ts = 25°C, 50 Ω load unless stated otherwise)

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Wavelength range	λ	842	–	948	nm	
Backside chip temperature	Ts	0	–	85	°C	
Sensitive area diameter	d	–	32	–	µm	
Bias voltage	U_{bias}	—	-2	-3	V	Positive voltage applied to cathode
Optical bandwidth	f_{3dBo}	25	28	–	GHz	Ts = 25°C to 85°C
Responsivity	R	0.5	0.55	–	A/W	Optical input 1 mW
Dark current	Id	–	-1	-100	nA	Tchip = 25°C to 85°C
Capacitance	C	–	100	110	fF	

Dimensions



Product variants

Type	Single chip	1 x 2 line array	1 x 4 line array
Part number	TPD-100(01)-WBD-B0	TPD-100(02)-WBD-B0	TPD-100(04)-WBD-B0
Dimensions	270 x 242 x 150 µm	270 x 492 x 150 µm	270 x 992 x 150 µm
Wiring		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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