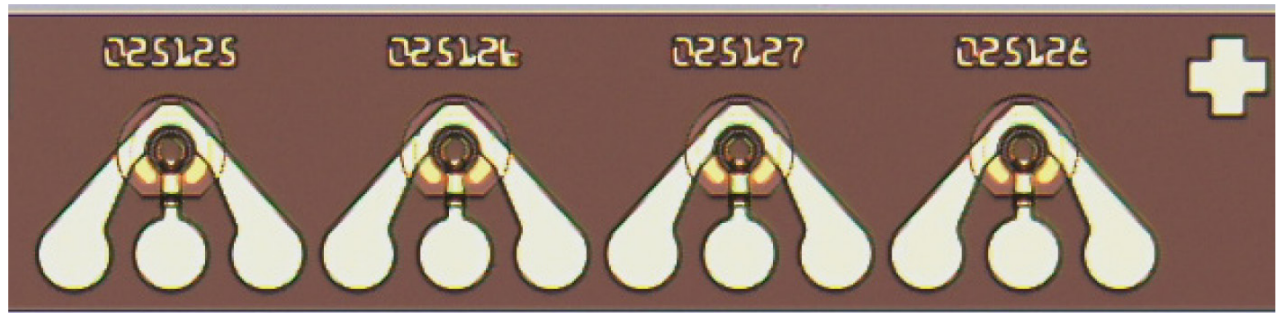


# 28 Gbps NRZ OR 56 Gbps PAM4 1X4 PIN PHOTODIODE ARRAY CHIP

INP02KK40D101



## FEATURES

- Top-illuminated device with optical illumination aperture diameter of 20  $\mu\text{m}$  and 250  $\mu\text{m}$  pitch
- G-S-G pads on top for easy of assembly
- Die-level self-hermetic
- Responds to 1260 nm to 1620 nm
- Typical responsivity at 1310 nm is 0.8 A/W
- Low capacitance of 80 fF
- Low dark current and high reliability
- Operating temperature -40  $^{\circ}\text{C}$  to 85  $^{\circ}\text{C}$
- RoHS compliant

## APPLICATIONS

- 25G/50G/100G Ethernet
- Single-mode datacom and telecom
- Fiber-optic transceiver, receivers and transponders

## SHIPPING REQUIREMENTS

- Tested and inspected chips on UV tape with grip ring  $\varnothing$  150 mm

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### Electro-Optical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Unit
Responsivity	R	1310 nm, VR = 2.5 V, 25 °C	0.8			A/W nA
Dark current	Id	VR = 5 V, 25 °C		1		
Capacitance	C	VR = 2.5 V, 25 °C		80		fF
O/E Bandwidth	f-3dB	VR = 2.5 V, 25 °C		18		GHz

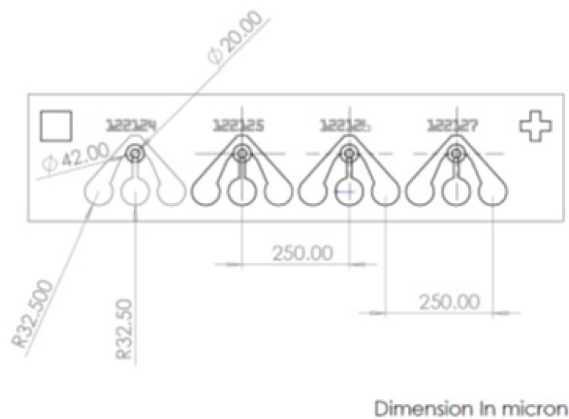
### Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Reverse Bias Voltage	Vr	20	V
Reverse Current	Ir	10	mA
Forward Current	If	10	mA
Optical Input Power	Pin	10	dBm

### Environmental Exposure Ratings

Parameter	Symbol	Rating	Unit
Operating Temperature	Top	-40 to 85	°C
Storage Temperature	Tstg	-40 to 120	°C
ESD threshold (HBM)	V <sub>ESD,th</sub>	>50	V

### Chip Dimensions



1X4 array chip dimensions

Parameter	Min	Typical	Max	Unit
Chip width	265	285	305	μm
Chip length	965	985	1005	μm
Array pitch		250		μm
Chip thickness	135	150	165	μm
Bond pad diameter		65		μm

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## RoHS Compliance

Coherent is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

## Ordering Information

Product Code	Wavelength	Description	Shipment Packaging
INP02KK40D102	1250 - 1650 nm	1X4 PD Array Die	chips on Grip ring <sup>(1)</sup>

<sup>(1)</sup> Tested and inspected chips on UV tape on grip ring Ø 150 mm (standard high volume)

## Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Coherent before they become applicable to any particular order or contract. In accordance with the Coherent policy of continuous improvement specifications may change without notice. Further details are available from any Coherent sales representative.