

## Series IPD12 PIN Diode

### The Series IPD12

The series IPD12 PINs are applicable for building high bit rate (10 Gbit/s NRZ and RZ) opto-electronic receivers for SONET/SDH and Ethernet applications.

The IPD12 series are vertical PIN diode devices suitable for hybrid integration in opto-electronic receivers and measurement testsets.



The IPD 12 series are vertically illuminated devices offering high optical input power capability and high linear phase behaviour.

The PINs comprise anti-reflection coating and passivation. Depending on application, types with and without on-chip bias networks are available. For frequencies below 2 GHz, external blocking capacitors are necessary.

### Features

- High bandwidth of 10 - 20 GHz (-3 dB)
- High optical input power (+6 dBm)
- High linear phase characteristic
- Low bias voltage (< 7 V)
- Low leakage current
- Operating temperatures from 0° to 80°C, 150°C short term
- Biasing external or on-chip
- Chip-size: with on-chip biasing: 1550 x 775 x 500  
pad sizes 100 x 100 (300 x 100 RF-Out Gnd)  
with external biasing: 775 x 775 x 500  
pad sizes 100 x 100 (200 x 100 RF-Out Gnd)  
Active optical region 12 (diameter)  
All dimensions in  $\mu\text{m}$
- Customized layouts are possible

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### Ordering Information

The series IPD12 PIN diodes are available in various configurations.

IPD12_	X	YY	Z		
	↑	↑	↑		
			N:	without biasing (external bias network necessary)	✓
			B:	with on-chip biasing	Q2/2002
		10:		bandwidth DC - 10 GHz (-3 dB)	✓
		15:		bandwidth DC - 15 GHz (-3 dB)	✓
		20:		bandwidth DC - 20 GHz (-3 dB)	✓
C:				Chip with anti-reflecting coating and passivation	✓
P:				Butterfly package, SMF with FC/PC-Connector, electrical coaxial connector	Q2/2002

e.g.: IPD12\_C15N: PIN chip with 15 GHz bandwidth, no on-chip biasing

### About IPAG

IPAG – Innovative Processing AG provides technology leadership for the ultra high-speed and high-frequency communication markets. IPAG develops, manufactures and markets monolithically integrated components based on Indium Phosphide (InP) technology.

IPAG's product lines include a broad variety of high speed integrated circuits for the fibre optic related telecom and datacom markets, including > 40 Gbit/s integrated receivers, modulators, filters and amplifiers. For more information about IPAG's products and solutions please visit our website or contact us via e-mail.



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