

14 Gbps PIN Photodiode Chip

1x1/4/12 chip



> 1x1, 1x4, 1x12
chips

> GaAs PIN
Photodiode

> e.g. for FDR
InfiniBand data
transmission

> 4 inch Wafer

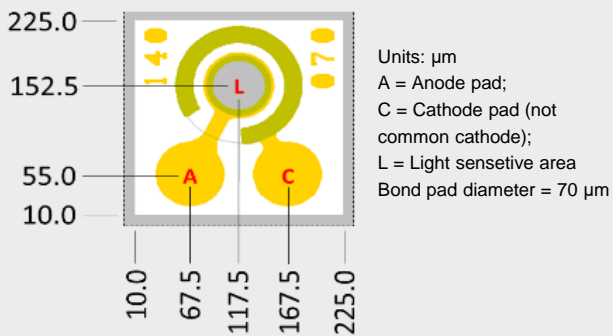
> High speed
modulation up
to 14 Gbps

> Low bias voltage,
Low dark current

Electro-optical characteristics

Chip temperature 25°C unless otherwise stated						
Parameter	Symbol	Units	Min	Typ	max	Test conditions
Responsivity	R	A/W		0.6		
Active area diameter	d_{act}	μm		55		
Dark current 1	I_{d1}	nA		0.02	0.2	$U_{bias} = -2\text{ V}$
Dark current 2	I_{d2}	μA			1	$U_{bias} = -20\text{ V}$
Capacitance	C	fF		180		$U_{bias} = -2\text{ V}$
Modulation bandwidth	$f_{3\text{ dB}}$	GHz		12		50 Ohm load, -3 dB, $U_{bias} = -2\text{ V}$
Wavelength range	λ	nm	840		860	

Dimensions



Absolute Maximum Ratings

Storage temperature	-40 to 140°C
Operating temperature	0 to 85°C
Continuous forward current	10 mA
Soldering temperature	330°C

NOTICE: Stresses greater than those listed under „Absolute Maximum Ratings“ may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other condition beyond those indicated for extended periods of time may effect device reliability.



ATTENTION: Electrostatic Sensitive Devices
Observe Precautions for Handling

Single Photodiode chip		Photodiode line arrays		
Description	PD chip, single channel	Description	1 x 4 PD line array	1 x 12 PD line array
Product Number	ULMPIN-14-TT-N0101U (PD07)	Product Number	ULMPIN-14-TT-N0104U (PD07)	ULMPIN-14-TT-N0112U (PD07)
Mounting	anode and cathode wire bonding on front side	Wiring	Electrically separated channels	Electrically separated channels
Dimensions	235 μm x 235 μm	Dimensions	235 μm x 985 μm	235 μm x 2985 μm
Thickness	150 μm	Thickness	150 μm	150 μm



Photodiode line array