

## InGaAs PIN PHOTODIODES

## PD-1150-XXX

### PIN Photodiode with Mini-Size TO Package

#### FEATURES

- 2 High Responsivity for Dual windows at 1310 nm and 1550 nm
- 2 Low Dark Current
- 2 Quick Pulse Response
- 2 Hermetically Sealed 2-Pin Metal Case
- 2 Active Diameter 75  $\mu\text{m}$  : PD-1150-075
- 2 Active Diameter 100  $\mu\text{m}$  : PD-1150-100
- 2 Active Diameter 150  $\mu\text{m}$  : PD-1150-150
- 2 2.4 mm Mini-Size Package

#### DESCRIPTION

PD-1150-XXX series InGaAs Photodiode are suited to receive the light at the wavelength range from 1100 nm to 1620 nm.

PD-1150-075 / PD-1155-075						
ELECTRICAL AND OPTICAL CHARACTERISTICS (T <sub>C</sub> =25°C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
	Active Area			75		$\mu\text{m}$
	Detection Range		1100	1310	1620	nm
R	Responsivity	V <sub>R</sub> =5V, $\lambda$ =1300nm	0.85		-	A/W
		V <sub>R</sub> =5V, $\lambda$ =1550nm	0.90			A/W
I <sub>dark</sub>	Dark Current	V <sub>R</sub> =5V		0.2	0.6	nA
C	Capacitance	V <sub>R</sub> =5V, f=1MHz		0.6	1.0	pF
T <sub>r</sub> /T <sub>f</sub>	Rise/Fall Time	V <sub>R</sub> =5V, 10~90%			0.3	ns
BW	Bandwidth	V <sub>R</sub> =5V	2			GHz

PD-1150-100 / PD-1155-100						
ELECTRICAL AND OPTICAL CHARACTERISTICS (T <sub>C</sub> =25°C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
	Active Area			100		$\mu\text{m}$
	Detection Range		1100	1310	1620	nm
R	Responsivity	V <sub>R</sub> =5V, $\lambda$ =1300nm	0.85		-	A/W
		V <sub>R</sub> =5V, $\lambda$ =1550nm	0.90			A/W
I <sub>dark</sub>	Dark Current	V <sub>R</sub> =5V		0.3	1.0	nA
C	Capacitance	V <sub>R</sub> =5V, f=1MHz			1.2	pF
T <sub>r</sub> /T <sub>f</sub>	Rise/Fall Time	V <sub>R</sub> =5V, 10~90%			0.5	ns
BW	Bandwidth	V <sub>R</sub> =5V	2			GHz

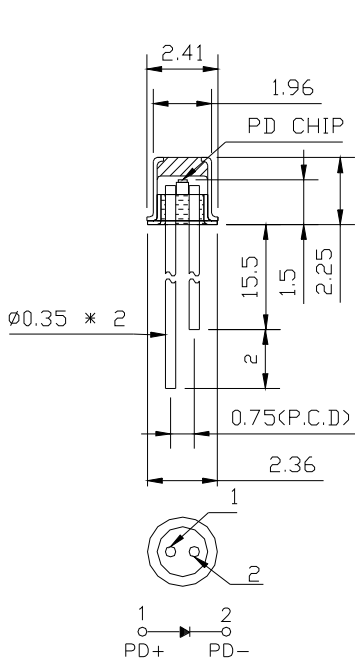
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PD-1150-150 / PD-1155-150						
ELECTRICAL AND OPTICAL CHARACTERISTICS (T <sub>C</sub> =25°C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
	Active Area			150		μ m
	Detection Range		1100	1310	1620	nm
R	Responsivity	V <sub>R</sub> =5V, λ=1300nm	0.85		-	A/W
		V <sub>R</sub> =5V, λ=1550nm	0.90			A/W
I <sub>dark</sub>	Dark Current	V <sub>R</sub> =5V		0.4	1.5	nA
C	Capacitance	V <sub>R</sub> =5V, f=1MHz			2	pF
T <sub>r</sub> /T <sub>f</sub>	Rise/Fall Time	V <sub>R</sub> =5V, 10~90%		1		ns
BW	Bandwidth	V <sub>R</sub> =5V		1		GHz

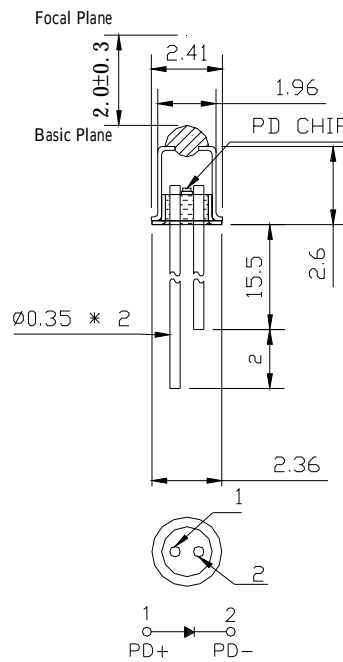
ABSOLUTE MAXIMUM RATINGS (T <sub>C</sub> =25 °C)			
Symbol	Parameter	Ratings	Unit
P <sub>o</sub>	Input Optical Power	10	mW
V <sub>RD</sub>	Reverse Voltage	20	V
I <sub>FD</sub>	Forward Current	10	mA
T <sub>opr</sub>	Operating Temperature	-40~+85	°C
T <sub>stg</sub>	Storage Temperature	-40~+85	°C

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MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



PD-1150-XXX



PD-1155-XXX

**Note:** 1. Specifications subject to change without notice.

2. Other PIN assignment is available upon request.

ORDER INFORMATION

Part No.: P D - 1 1 5  -

Code	Cap
0	Flat Window
5	Ball Lens

Code	Active area
075	75 $\mu\text{m}$
100	100 $\mu\text{m}$
150	150 $\mu\text{m}$