

## Description

The RPD3000-SA-xx-H-B series of Photo-detector are well suited for low-cost, receptacle packages and high-performance in optical networking applications.

The devices feature low capacitance, high linearity, excellent frequency response up to 3000MHz, a wide operating temperature range, and high responsivity. The RPD3000 is also designed to use in a variety of optical network applications including CATV forward/return Path, PON network, QAM system, EDFA monitors and FTTH applications.

## Features

- ❑ High responsivity @ 1310/1550nm
- ❑ Low capacitance
- ❑ 3000MHz frequency response
- ❑ High responsivity :
  - >= 0.80 @ 1310nm
  - >= 0.85 @ 1550nm

## Applications

- ❑ CATV forward/return Path
- ❑ PON network
- ❑ QAM system
- ❑ EDFA monitors
- ❑ FTTC/FTTH networks





## Absolute Maximum Ratings

Exceeding the conditions specified below may result in permanent damage to the pin module.

Parameter	Symbol	Min	Max	Unit
Operating Case Temperature	Top	-40	85	°C
Storage Temperature	Tstg	-40	100	°C
Saturation Input Power	Ps	--	10	mW
Forward Current	If	--	10	mA
Reverse Bias	Vr	--	30	V

## Electrical/Optical Characteristics

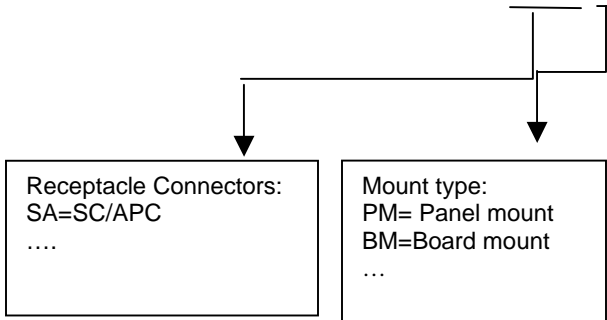
Parameters are at 25°C unless otherwise noted.

Parameter	Symbol	Min	Typ	Max	Unit
Active Diameter	Da		40	80	um
Detection Wavelength range	$\lambda$	1100	--	1650	nm
Responsivity	R	--	$\geq 0.80@1310\text{nm}$ , $\geq 0.85@1550\text{nm}$	--	mA/mW mA/mW
Frequency Bandwidth	Fb	1	--	3000	MHz
Frequency Response	Fr	--	+/- 0.5	--	dB
Distortion: *					
2 <sup>nd</sup> Order Intermodulation	IMD2	--	$\leq -75$	--	dBc
3 <sup>rd</sup> Order Intermodulation	IMD3	--	$\leq -85$	--	dBc
Back Reflection	RL	--	--	-40	dB
Dark Current	I <sub>D</sub>	--	0.1	1	nA
Capacitance	C	--	0.6	1	pF

\* 1310nm Two tone test, OMI= 40% and total received power is 0 dBm. The worst case of distortion measured at 345MHz, 450MHz, 600MHz, 850MHz, 1000MHz, 1780MHz and 1950MHz.

Ordering options:

RPD3000-SA-xx-H-B



Outline dimensions:

OUTLINE DIAGRAM [Unit:mm]  
TOLERANCES UNLESS NOTED ±0.5

