# SIEMENS

Ternary PIN Photodiode in TO-Package with Integrated Optics

SRD 00212Z

- InGaAs/InP - PIN-photodiode
- Designed for application in fiber-optic communication systems
- Sensitive receiver for the 2nd and 3rd optical window (1300 nm and 1500 nm)
- Suitable for bit rates up to 1.2 Gbit/s
- Low junction and low package capacitance
- Fast switching times
- Low dark current
- Low noise
- High reverse-current stability by planar structure
- High spectral sensitivity by build in optics
- Hermetically sealed 3-pin metal case
- No z-adjustment necessary (optimum coupling on cap surface)
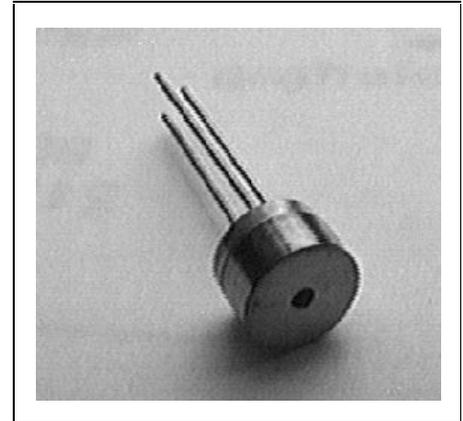
Type	Ordering Code	Connector/Flange
SRD 00212Z	Q62702-P3010	TO, with optics

Component with other pin configuration or other package outlines (cap) on request.

Maximum Ratings

| Parameter	Symbol	Values	Unit
Forward current	I_F	10	mA
Reverse voltage	V_R	20	V
Operating and storage temperature	T_A T_{stg}	$-40 \ldots +85$	°C
Max. radiant power into the opt. port ($V_R = 5$ V)	Φ_{port}	1	mW
Soldering time (wave / dip soldering), distance between solder point and base plate ≥ 2 mm, 260 °C	t_s	10	s

Characteristics

All optical data refer to an optimally coupled 10/125 μm SM fiber.

Parameter	Symbol	Values	Unit
Spectral sensitivity λ = 1300 nm, V_R = 5 V	S_λ	0.9 ($\geq$ 0.8)	A/W
Change in spectral sensitivity in operating temperature range	ΔS_λ	< 0.2	%/K
Rise and fall time R_L = 50 Ω, V_R = 5 V, λ = 1310 nm, Φ_{port} = 100 μW	t_r; t_f	0.3 ($\leq$ 0.5)	ns
Total capacitance V_R = 5 V, Φ_{port} = 0, f = 1 MHz	C_5	1.0 ($\leq$ 1.5)	pF
Dark current V_R = 5 V, T_A = 85 °C, Φ_{port} = 0	I_D	1 ($\leq$ 50)	nA

Capacitance $C = f(V_R)$
Φ_{port} = 0, f = 1 MHz
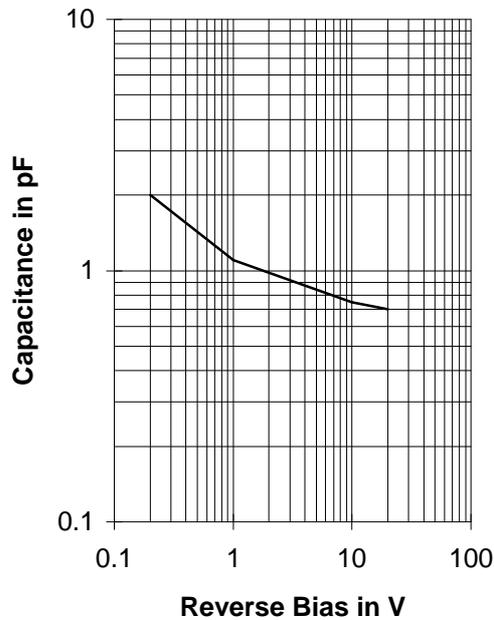
Relative Spectral Sensitivity
V_R = 5 V
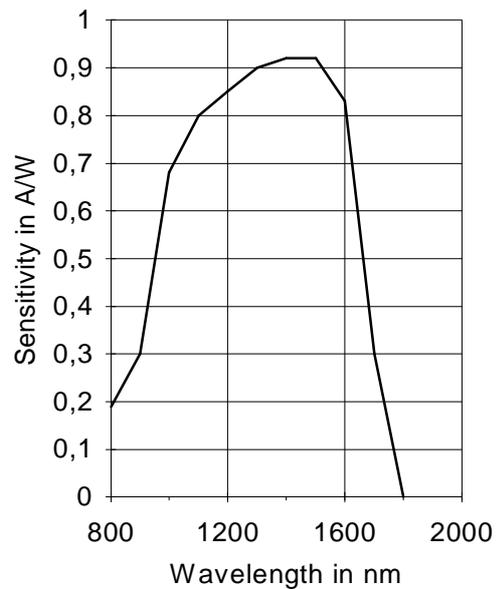
Dark Current $I_R = f(V_R)$
$I_F = f(V_F)$
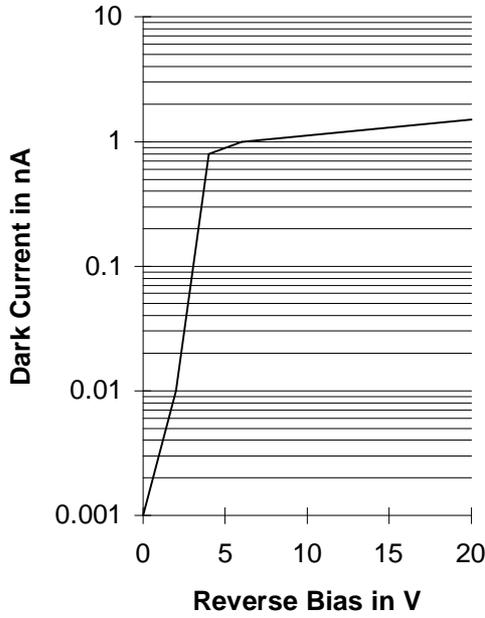
Dark Current $I_R = f(T_A)$
$\Phi_{port} = 0$, $V_R = 5$ V

Dark Current in nA

Reverse Bias in V

Dark Current in nA

Ambient Temperature in °C
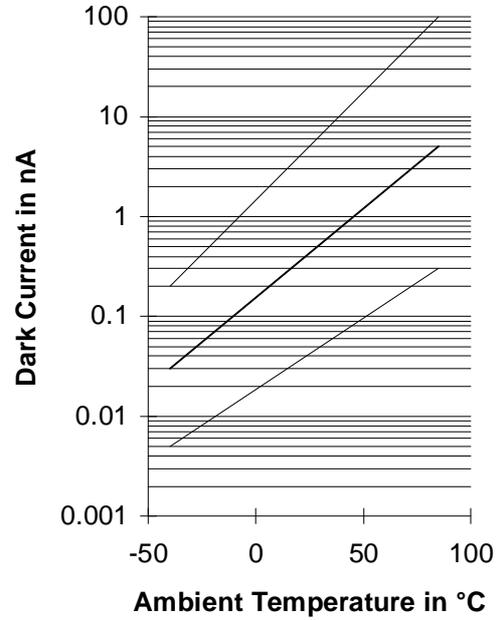
Package Outlines (Dimensions in mm)

2.54 mm
spacing

2.45
2.25

ø0.5
ø0.3

ø5.50
ø5.45

1.2
1.0

14.0
12.5

Bottom view

GM006919

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