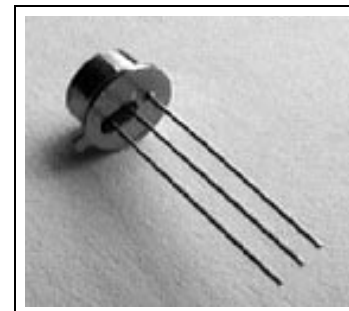


## Ternary PIN Photodiode in TO-Package, Central Pin

SRD 00231Z

- InGaAs/InP – PIN-photodiode
- Designed for application in fiber-optic communication systems
- Sensitive receiver for the 2<sup>nd</sup> and 3<sup>rd</sup> optical window (1300nm and 1500nm)
- Suitable for bit rates up to 2.5 Gbit/s
- Low junction and low package capacitance
- Fast switching times
- Low dark current
- Low noise
- High reverse-current stability by planar structure
- Hermetically sealed 3-pin metal case with central pin



Type	Ordering Code	Connector/Flange
SRD 00231Z	Q62702-Pxxxx	TO with central pin

### 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 ... + 85	°C
Max. radiant power into the opt. port ( $V_R = 5$ V)	$\Phi_{port}$	1	mW
Soldering time (wave / dip soldering), distance between solder point and base plate $\geq 2$ mm, 260 °C	$t_s$	10	s

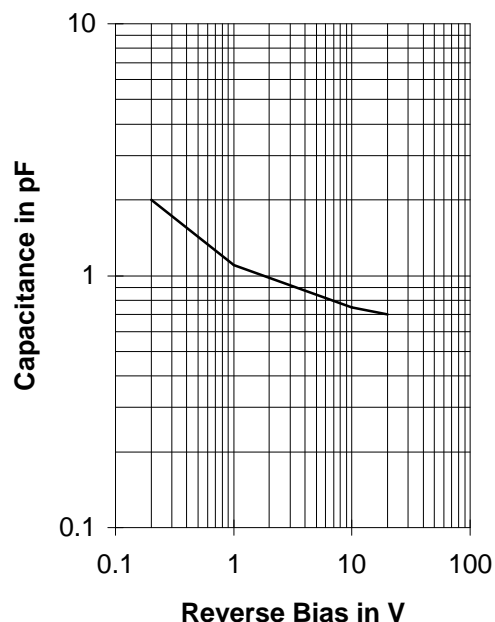
### Characteristics

All optical data refer to an optimally coupled 10/125  $\mu\text{m}$  SM fiber.

Parameter	Symbol	Values	Unit
Spectral sensitivity $\lambda = 1300 \text{ nm}$ , $V_R = 5 \text{ V}$	$S_\lambda$	0.9 ( $\geq 0.8$ )	A/W
Change in spectral sensitivity in operating temperature range	$\Delta S_\lambda$	< 0.2	%/K
Rise and fall time $R_L = 50 \Omega$ , $V_R = 5 \text{ V}$ , $\lambda = 1310 \text{ nm}$ , $\Phi_{\text{port}} = 100 \mu\text{W}$	$t_r$ ; $t_f$	0.25 ( $\leq 0.4$ )	ns
Total capacitance $V_R = 5 \text{ V}$ , $\Phi_{\text{port}} = 0$ $f = 1 \text{ MHz}$	$C_5$	0.7 ( $\leq 0.9$ )	pF
Dark current $V_R = 5 \text{ V}$ , $T_A = 85 \text{ }^\circ\text{C}$ , $\Phi_{\text{port}} = 0$	$I_D$	1 ( $\leq 50$ )	nA

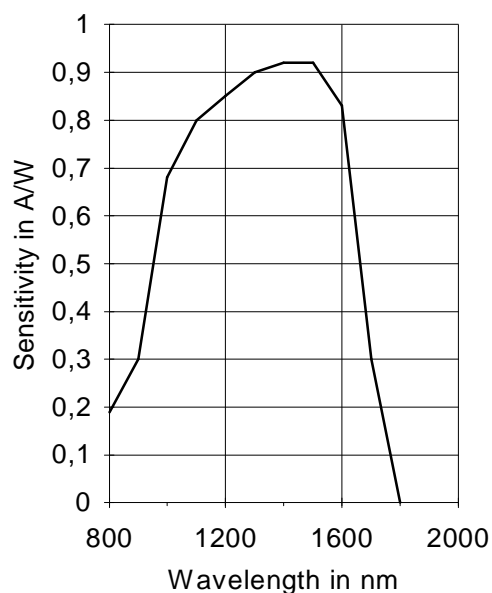
### Capacitance $C = f(V_R)$

$\Phi_{\text{port}} = 0$ ,  $f = 1 \text{ MHz}$

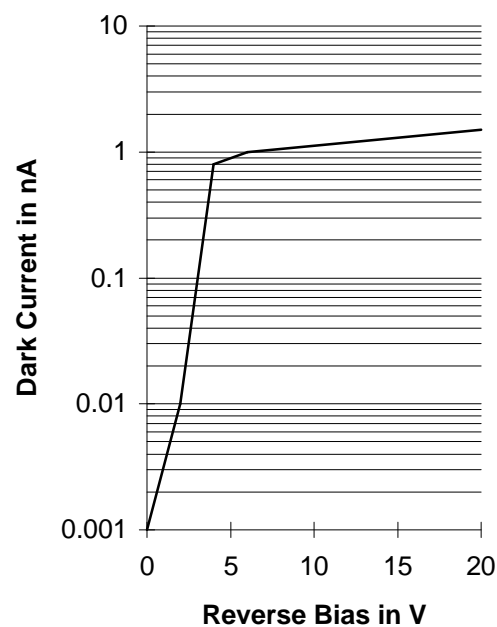


### Relative Spectral Sensitivity

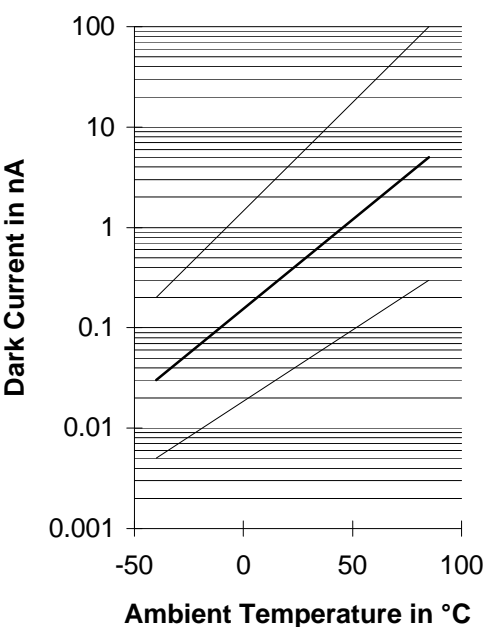
$V_R = 5 \text{ V}$



Dark Current  $I_R = f(V_R)$   
 $I_F = f(V_F)$



Dark Current  $I_R = f(T_A)$   
 $\Phi_{port} = 0, V_R = 5\text{ V}$



Package Outlines (Dimensions in mm)

