

PHOTO DIODES 3.6 μm

Model PD36-03-TEC 3.6 mm 0.3 mm

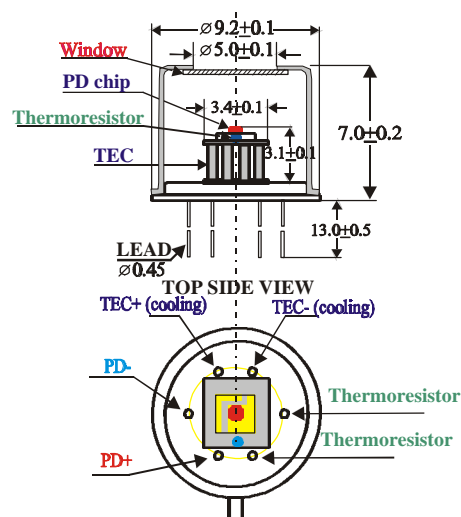
One stage Thermoelectrically Cooled InAs/InAsSbP photodiodes

Photodiodes **PD36-03-TEC** are designed for detecting the radiation in the Middle Infrared spectral range from 1000 to 3600 nm. Heterostructures with the InAsSbP “window” are grown on InAs substrates.

- Photodiodes **PD36-03-TEC** are placed in standard 9 mm package TO-5. Thermocooler and thermoresistor are mounted inside package TO-5.
- Photodiodes **PD36-03-TEC** have the photosensitive area with diameter of 300 μm. Fast response makes possible their use for the detection of high frequency modulated laser or LED emission.
- Related products: **PD36-03** can be used in optical pair with our **LED27÷LED36** and **LD300÷LD360**. We offer the preamplifier model **AM-04** suitable for **PD36-03**



Package TO-5



Parameters	$t = -20^{\circ}\text{C}$	$t = 22^{\circ}\text{C}$
Cut-off wavelength, μm (at 10%)	3.70	3.80
Responsivity, A/W ($\lambda = 3.4 \div 3.6 \mu\text{m}$)	1.0 – 1.2	
Peak wavelength > 90%	2.5-3.3	2.6-3.4
Dark Current, μA ($V = -0.2\text{V}$)	40-90	400-500
($V = -0.4\text{V}$)	90-150	500-600
Shunt resistance, Ohm	minimum 900	minimum 100
	typical 1100	typical 120
Capacitance, pF ($V=0$)	minimum 800	typical 1300
Rise and Fall Time, ns ($V=0\text{V}$)	150-200 ns	
Detectivity, D^* , $\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$ ($\lambda_p, 1000, 1$)	$(0.6-1.0) \cdot 10^{10}$	$(1-3) \cdot 10^9$
	300	
Sensitive area diameter, μm	300	
Package	TO-5 with thermocooler and thermistor	

Main thermocooler parameters (without load)

I_{max} (Amps)	Q_{max} (Watts)	U_{max} (Volts)	ΔT_{max} $^{\circ}\text{C}$
0.7	0.4	1.0	67

