

PHOTO DIODES 3.6 μm

Model PD36-02-TEC-PR 3.6 mm 0.2 mm

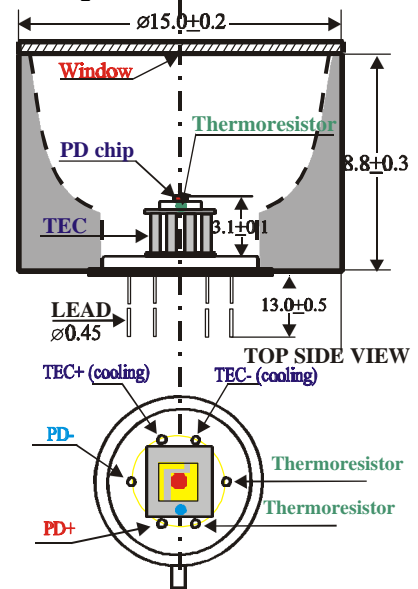
One stage Thermoelectrically Cooled InAs/InAsSbP photodiodes

Photodiodes **PD36-02-TEC-PR** 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 **PD36-02-TEC-PR** are placed in standard 9 mm package TO-5. Thermocooler and thermoresistor are mounted inside package TO-5.
- Photodiodes **PD36-02-TEC-PR** have the photosensitive area with diameter of 200 μm . Fast response makes possible their use for the detection of high frequency modulated laser or LED emission.
- Related products: **PD36-02** can be used in optical pair with our **LED27÷LED36** and **LD300÷LD360**. We offer the preamplifier model **AM-04** suitable for **PD36-02**.



Package TO-5 with Parabolic Reflector



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 ($V = -0.2\text{ V}$)	20-50	200-300
($V = -0.4\text{ V}$)	70-100	400-500
Shunt resistance, kOhm	<u>minimum</u> 1.0	<u>minimum</u> 0.12
	<u>typical</u> 1.3	<u>typical</u> 0.14
Capacitance, pF ($V=0$)	<u>minimum</u> 600 pF	<u>typical</u> 1100 pF
Rise and Fall Time, ns	(V=0 V) 120-150 ns	
	(V=-0,5 V) 20-50 ns	
Detectivity, D^* , $\text{cm.Hz}^{1/2}/\text{W}$ ($\lambda_p, 1000, 1$)	(0.6-1.0) 10^{10}	
	(1-3) 10^9	
Sensitive area diameter, μm	200	
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

