

# PHOTO DIODES 3.6 μm

## Model PD36-03-TEC-PR 3.6 mm 0.3 mm

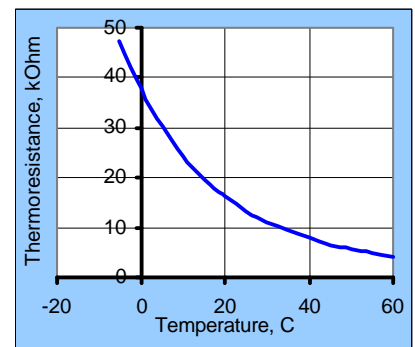
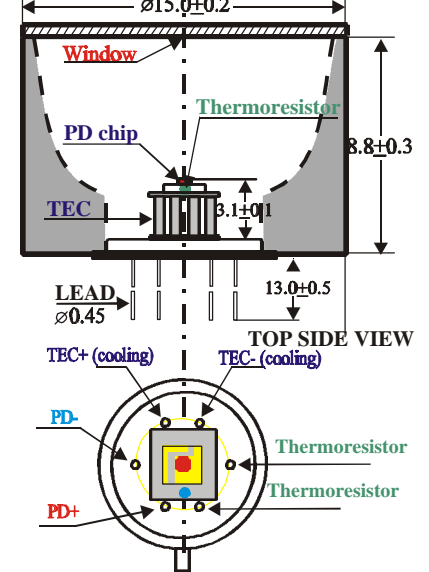
### One stage Thermoelectrically Cooled InAs/InAsSbP photodiodes

Photodiodes **PD36-03-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 **PD36-03-TEC-PR** are placed in standard 9 mm package TO-5. Thermocooler and thermoresistor are mounted inside package TO-5.
- Photodiodes **PD36-03-TEC-PR** 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-TEC-PR** 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 with Parabolic Reflector



Parameters	t= -20° C	t=22° C
Cut-off wavelength, μm (at 10%)	3.70	3.80
Responsivity, A/W (λ=3.4÷3.6μm)	1.0 – 1.2	
Peak wavelength > 90%	2.5-3.3	2.6-3.4
Dark Current, μA (V= -0.2 V)	40-90	400-500
(V= -0.4 V)	90-150	500-600
Shunt resistance, Ohm	<u>minimum</u> 900	<u>minimum</u> 100
	<u>typical</u> 1100	<u>typical</u> 120
Capacitance, pF (V=0)	<u>minimum</u> 800	<u>typical</u> 1300
Rise and Fall Time, ns (V=0 V)	150-200 ns	
Detectivity, D*, cm.Hz <sup>1/2</sup> /W (λp,1000,1)	(0.6-1.0) 10 <sup>10</sup>	(1-3) 10 <sup>9</sup>
	300	
Sensitive area diameter, μm	300	
Package	TO-5, thermocooler, thermistor and Parabolic Reflector	

Main thermocooler parameters (without load)

I <sub>max</sub> (Amps)	Q <sub>max</sub> (Watts)	U <sub>max</sub> (Volts)	ΔT <sub>max</sub> °C
0.7	0.4	1.0	67

