

## InAs Photodiode IA35-Series

### Description

The IA35-series is a heterostructure photodiode matched to InAs substrate with a nominal wavelength cut-off at 3.5  $\mu\text{m}$ .

### Features

- 20 % cut-off wavelength  $\geq 3.50 \mu\text{m}$
- Typical peak responsivity: 1.05 A/W
- Excellent temperature stability
- Mounted in TO-46 package with sapphire window



### Applications

- Non-contact temperature measurement
- Spectrophotometer
- Diode laser monitoring
- Gas analysis

### Optical Characteristics Specifications @ 25°C

Part Number	Diameter [ $\mu\text{m}$ ]	20% Cut off Wavelength <sup>a</sup> [ $\mu\text{m}$ ]	Peak Wavelength <sup>a</sup> [ $\mu\text{m}$ ]	Peak Responsivity <sup>a</sup> [A/W]		Responsivity [A/W]					
						@ 900 nm <sup>a</sup>		@ 2800 nm <sup>a</sup>		@ 3200 nm <sup>a</sup>	
			Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
IA35S500S4i	500	3.50	2.8	0.95	1.08	n.a.	0.1	0.95	1.05	n.a.	0.90

<sup>a</sup> Parameter tested on batch level

<sup>b</sup> Parameter 100% tested

### Electro-Optical Characteristics Specifications @ 25°C

Part Number	Diameter [ $\mu\text{m}$ ]	Shunt Impedance @ $V_R = 10 \text{ mV}^b$ [Ohm]		Dark Current @ $V_R = 0.1 \text{ V}^b$ [mA]		Peak $D^*^a$ [ $\text{cm Hz}^{1/2} / \text{W}$ ]	Peak NEP <sup>a</sup> [ $\text{W} / \text{Hz}^{1/2}$ ]	Capacitance @ $V_R = 0 \text{ V}^a$ [pF]
		Min.	Typ.	Typ.	Max.			
IA35S500S4i	500	450	700	0.15	1	1.0 E10	6.0 E-12	1000

<sup>a</sup> Parameter tested on batch level

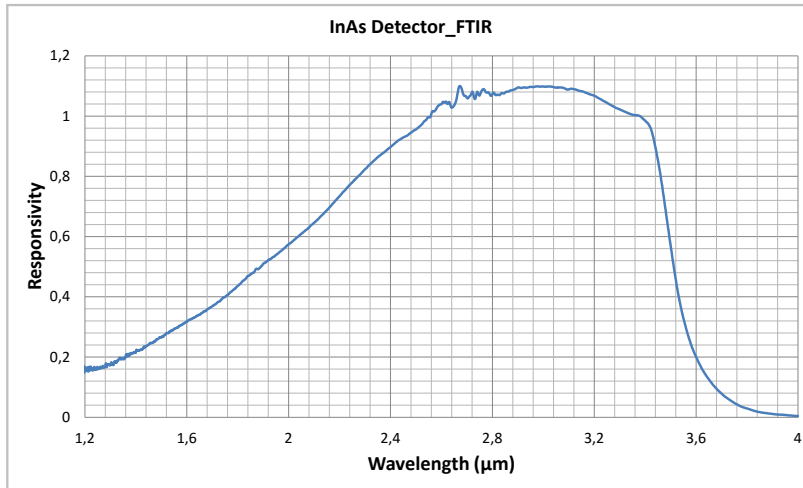
<sup>b</sup> Parameter 100% tested

### Absolute Maximum Ratings

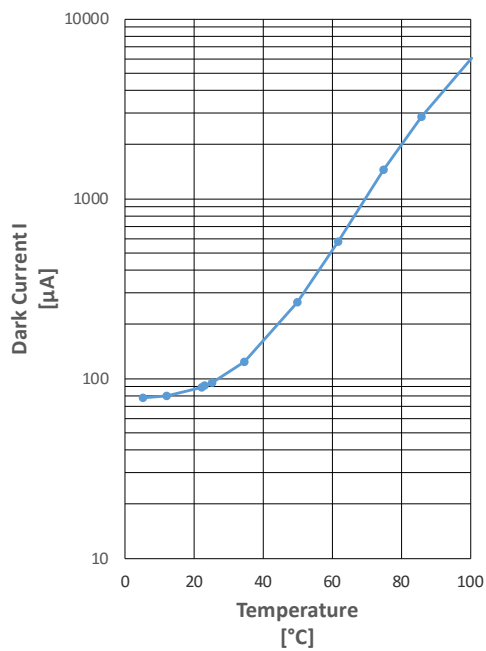
	Min.	Max.
Storage temperature [°C]	-55	+80
Operating temperature [°C]	-40	+60
Reverse bias, cw [V]	-	0.25
Forward current, cw [mA]	-	10
Soldering temperature, 5 sec. [°C]	-	260
ESD damage threshold, human body model class 1A*, [V]	0	<250

\* ANSI / ESD STN5. 1-2007

Spectral Response



Temperature Dependence of the Dark Current



## Product Changes

LASER COMPONENTS reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application.

## Ordering Information

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website at [www.lasercomponents.com](http://www.lasercomponents.com)