
Features

- 1000 μm x 1000 μm active area
- Low dark current
- Fast response time
- High speed epitaxy
- Fully depleted at 3.5 V
- Optimized for blue light

Description

High speed epitaxy PIN photodiode with 1.0 mm² square active area. Metal can type hermetic isolated TO52 package with clear glass window. Other packaging options available upon special request.

Application

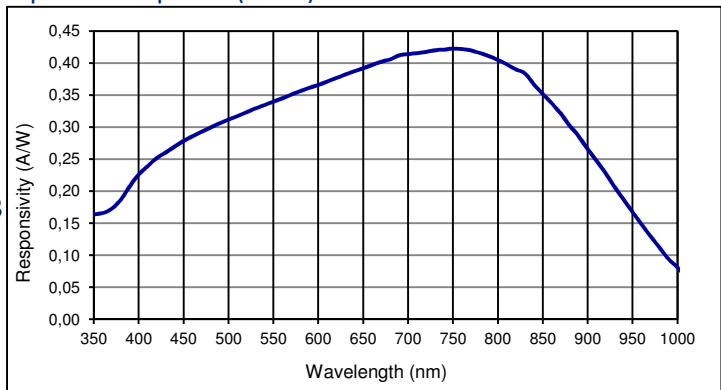
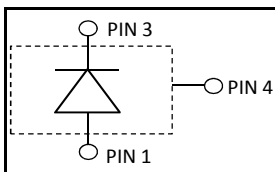
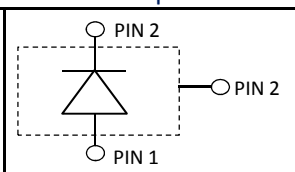
- Pulsed light detection
- High speed photometry
- High speed optical communications
- Laser monitoring

RoHS

2002/95/EC


Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T _{STG}	Storage temp	-55	125	°C
T _{OP}	Operating temp	-40	100	°C
V _{max}	Max reverse voltage		40	V
I _{PEAK}	Peak DC current		10	mA

Spectral response (23 °C)

Schematic 501424

Schematic option TO52S3

Electro-optical characteristics @ 23 °C

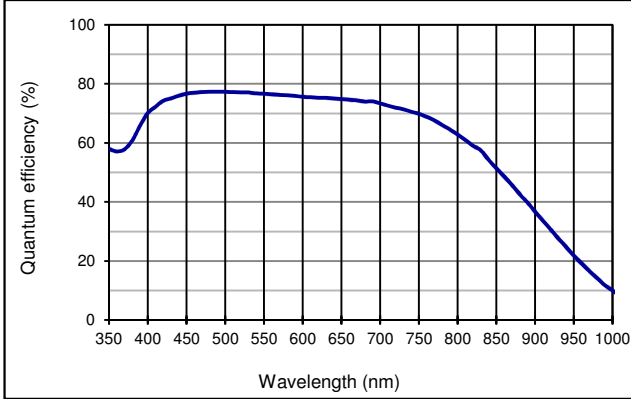
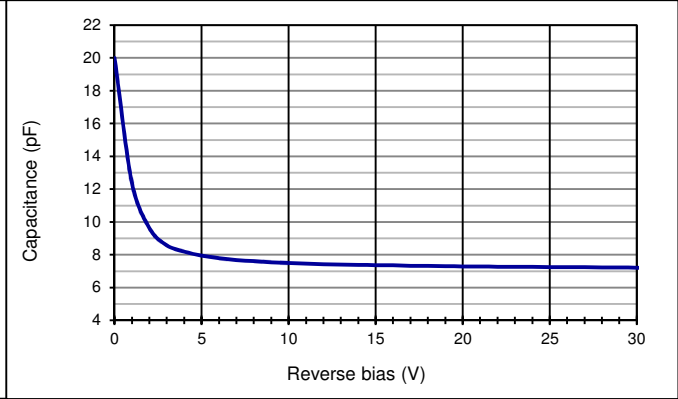
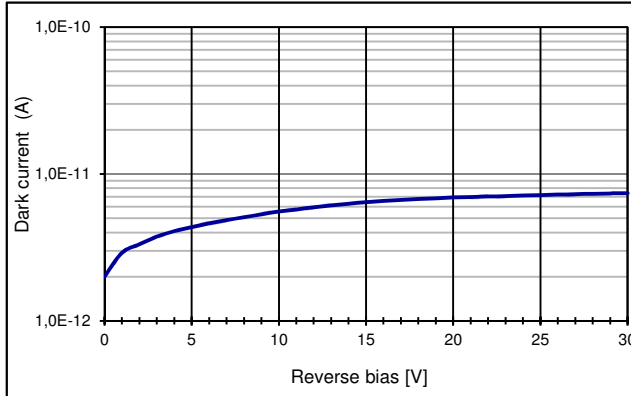
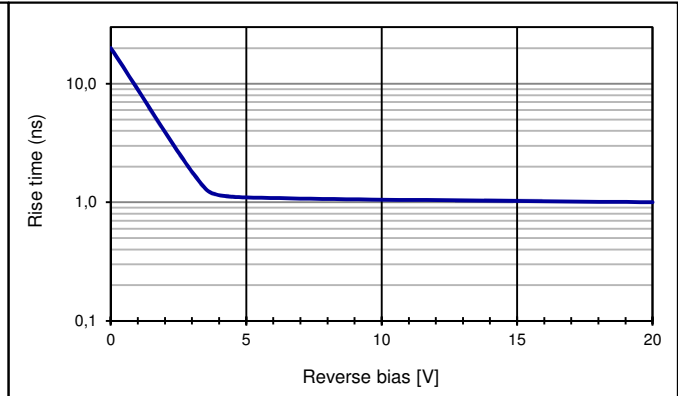
Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		1000 x 1000			μm
	Active area		1.0			mm ²
I _D	Dark current	V _R = 0 V		0.005	0.025	nA
		V _R = 3.5 V		0.01	0.05	nA
C	Capacitance	V _R = 0 V		20	30	pF
		V _R = 3.5 V		8.5	10	pF
	Responsivity	λ = 355 nm		0.16		A/W
		λ = 405 nm		0.23		A/W
t _R	Rise time	V _R = 3.5 V; λ = 405 nm; R _L = 50 Ω		1.3		ns
		V _R = 20 V; λ = 405 nm; R _L = 50 Ω		1.0		ns
V _{BR}	Breakdown voltage	I _R = 2 μA	40			V
	Shunt resistance	V _R = 10 mV		2000		MΩ
	N.E.P.	V _R = 3.5 V; λ = 405 nm		8 E-15		W/√Hz

European, International Sales:


First Sensor AG
 Peter-Behrens-Strasse 15
 12459 Berlin
 Germany
 T +49 30 6399 2399
 F +49 30 639923-752
 sales.opto@first-sensor.com

USA:


First Sensor Inc.
 5700 Corsa Avenue #105
 Westlake Village
 CA 91362 USA
 T +1 818 706 3400
 F +1 818 889 7053
 sales.us@first-sensor.com

Quantum efficiency (23 °C)

Capacitance as fct of reverse bias (23 °C)

Dark current as fct of bias (23 °C)

Rise time as fct of bias (23 °C)

Application hints:

Please refer to document "Instructions for handling and processing"

European, International Sales:

 First Sensor AG
 Peter-Behrens-Strasse 15
 12459 Berlin
 Germany
 T +49 30 6399 2399
 F +49 30 639923-752
 sales.opto@first-sensor.com

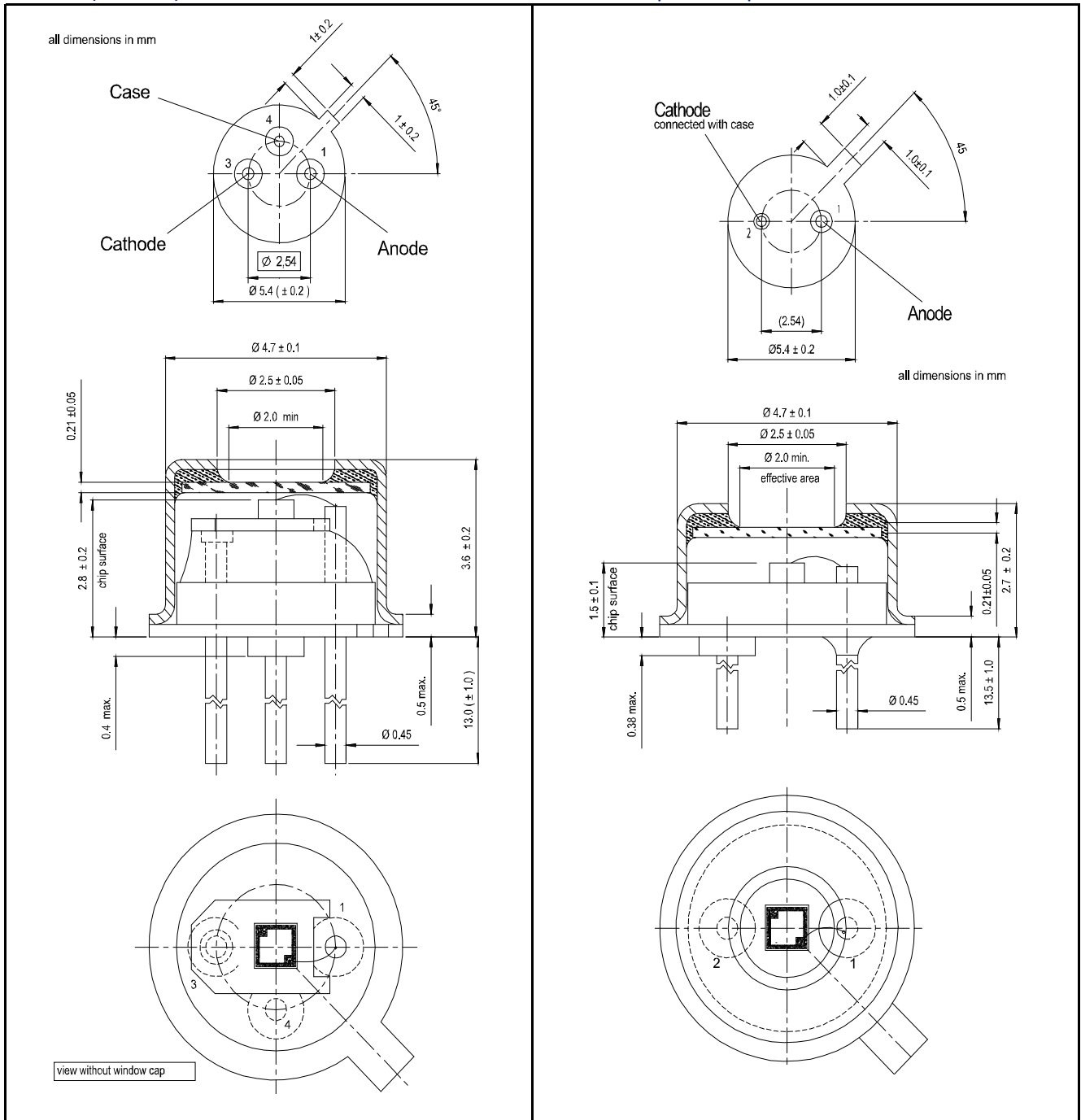
USA:

 First Sensor Inc.
 5700 Corsa Avenue #105
 Westlake Village
 CA 91362 USA
 T +1 818 706 3400
 F +1 818 889 7053
 sales.us@first-sensor.com

Technical Drawing

TO52S1 (isolated) # 501424

TO52S3 on special request



European, International Sales:



First Sensor AG
 Peter-Behrens-Strasse 15
 12459 Berlin
 Germany
 T +49 30 6399 2399
 F +49 30 639923-752
 sales.opto@first-sensor.com

USA:



First Sensor Inc.
 5700 Corsa Avenue #105
 Westlake Village
 CA 91362 USA
 T +1 818 706 3400
 F +1 818 889 7053
 sales.us@first-sensor.com