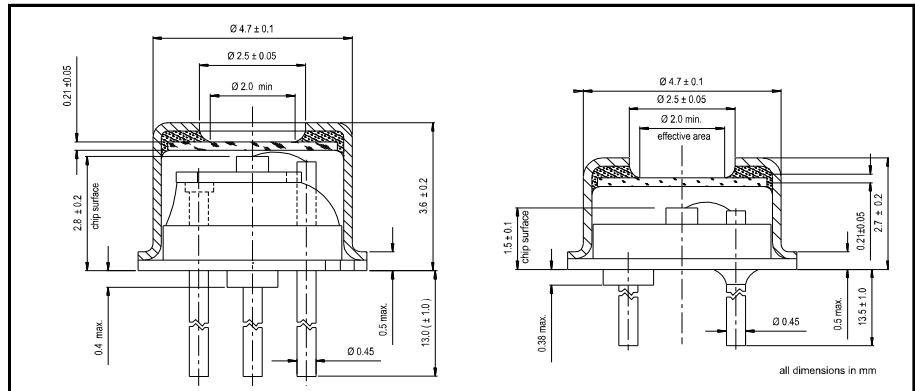
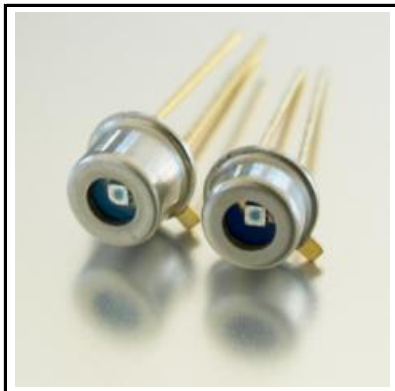


First Sensor PIN Photo Diode Data Sheet

Part Description PC0.55-5 TO

Order # 501257

Version 28-11-11



Features

- 840 μm diameter active area
- Low dark current
- Fast response time
- High speed epitaxy

Description

High speed epitaxy PIN photodiode with 0.55 mm^2 circular active area. Metal can type hermetic TO52 package with clear glass window. Two TO52 types available, customization on request.

Application

- Pulsed light detection
- High speed photometry
- High speed optical communications
- Fiber optic light monitoring

RoHS

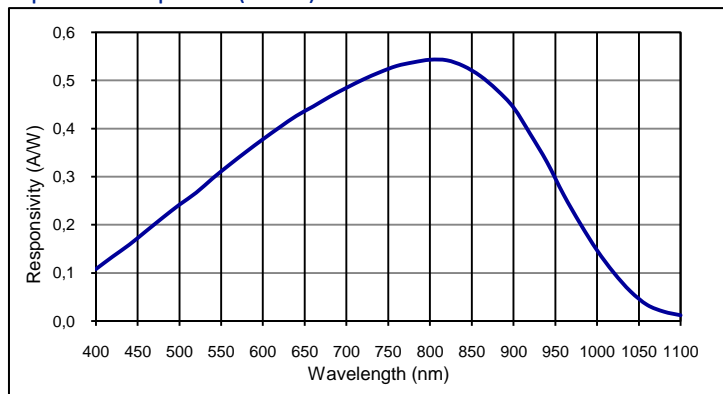
2002/95/EC



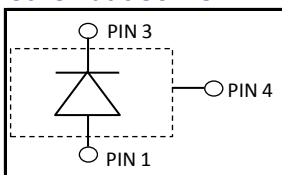
Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-55	125	$^{\circ}\text{C}$
T_{OP}	Operating temp	-40	100	$^{\circ}\text{C}$
V_{max}	Max reverse voltage		40	V
I_{PEAK}	Peak DC current		10	mA

Spectral response (23 $^{\circ}\text{C}$)



Schematic 501257



Electro-optical characteristics @ 23 $^{\circ}\text{C}$

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		diameter 840			μm
	Active area		0.55			mm^2
I_D	Dark current	$V_R = 20\text{ V}$		0.2		nA
C	Capacitance	$V_R = 0\text{ V}$		10		pF
C	Capacitance	$V_R = 20\text{ V}$		2		pF
	Responsivity	$\lambda = 635\text{ nm}$		0.4		A/W
	Responsivity	$\lambda = 800\text{ nm}$		0.52		A/W
t_R	Rise time	$V_R = 20\text{ V}; \lambda = 850\text{ nm}; R_L = 50\ \Omega$		1		ns
V_{BR}	Breakdown voltage	$I_R = 2\ \mu\text{A}$	40	50		V
	Shunt resistance	$V_R = 10\text{ mV}$		500		$\text{M}\Omega$
	N.E.P.	$V_R = 20\text{ V}; \lambda = 850\text{ nm}$		1.5 E-14		$\text{W}/\sqrt{\text{Hz}}$

European, International Sales:

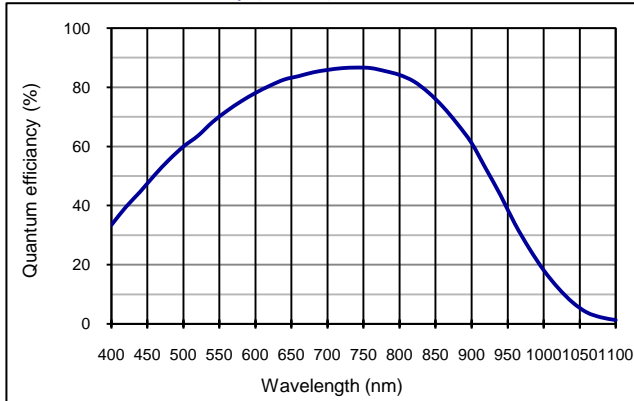
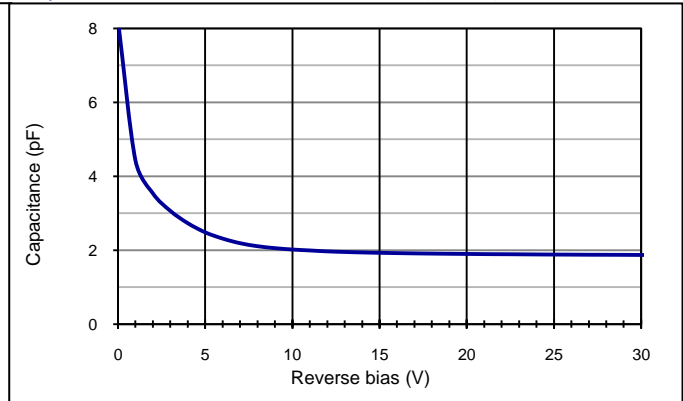
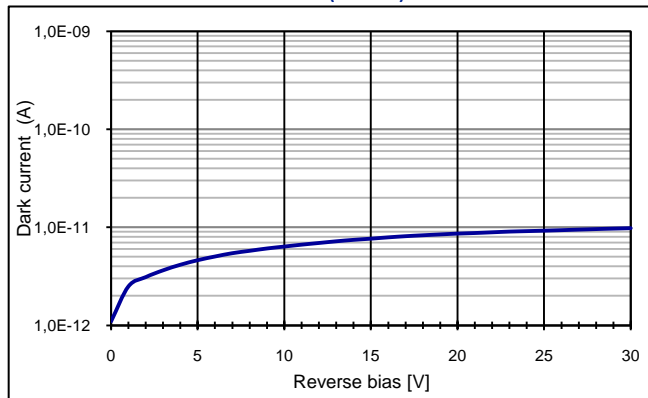


First Sensor AG
 Peter-Behrens-Strasse 15
 12459 Berlin
 Germany
 T +49 30 6399 2399
 F +49 30 639923-752
 sales.opto@first-sensor.com

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)

Application hints:

Please refer to document "Instructions for handling and processing"

Package dimension:

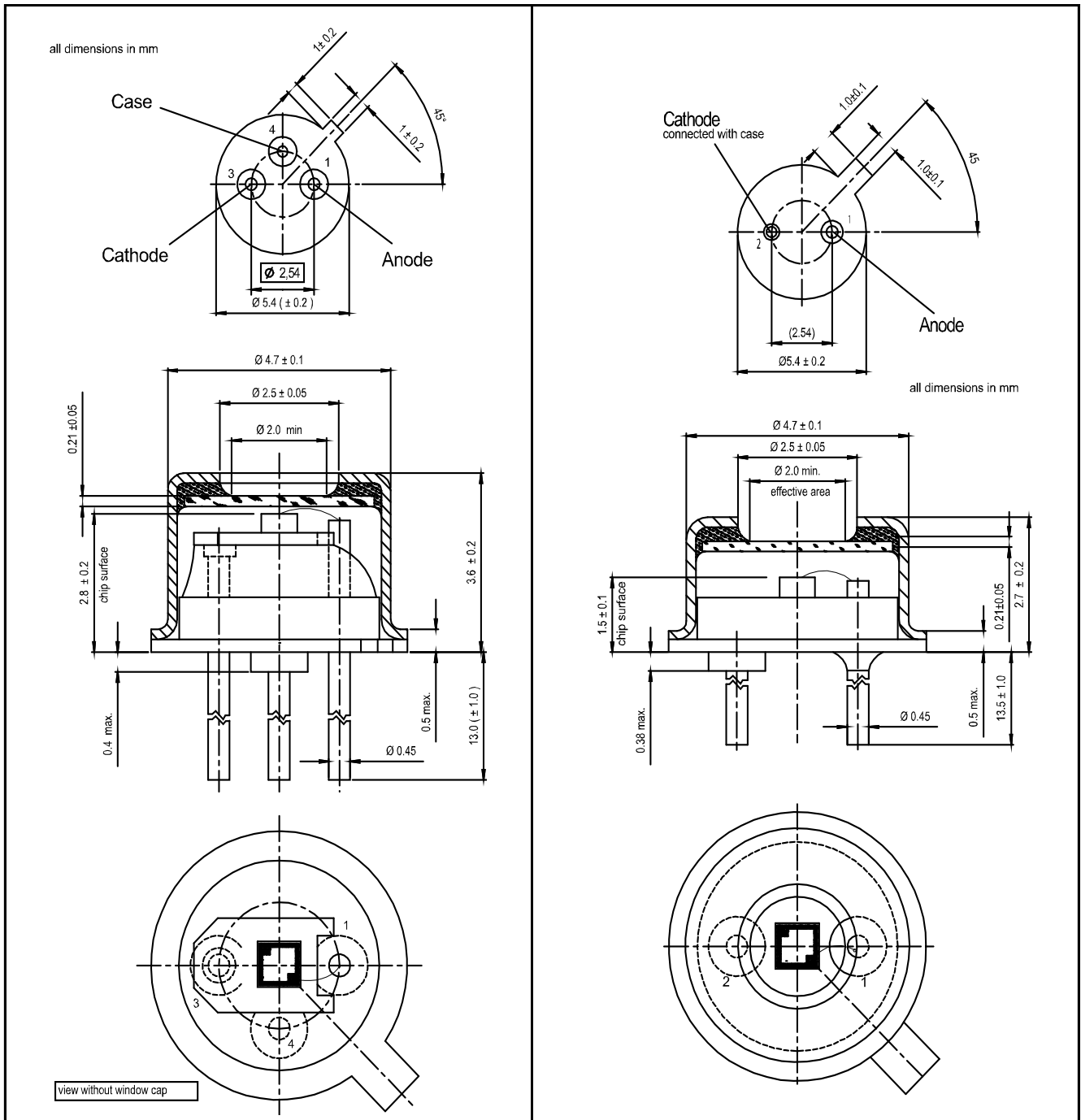
Small quantities: Foam pad, boxed (12 cm x 16.5 cm)

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 12459 Berlin
 Germany
 T +49 30 6399 2399
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 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, Package: TO52
TO52S1 #501257
TO52S3 t.b.d.


Disclaimer: Due to our strive for continuous improvement, specifications are subject to change within our PCN policy according to JESD46C.

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 Germany
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 F +49 30 639923-752
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