
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. Ceramic carrier type non hermetic SMD package with clear glass window (501428) or silicone potting (on request). Reflow solderable.

Application

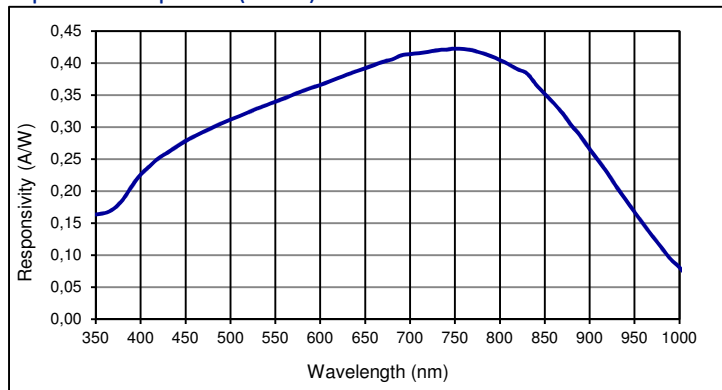
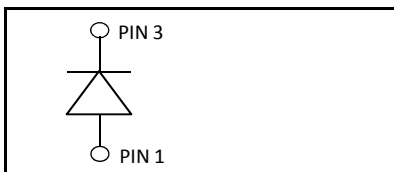
- Pulsed light detection
- High speed photometry
- High speed optical communications
- Laser monitoring

RoHS

2002/95/EC


Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T _{STG}	Storage temp	-40	100	°C
T _{OP}	Operating temp	-20	70	°C
V _{max}	Max reverse voltage		40	V
I _{PEAK}	Peak DC current		10	mA

Spectral response (23 °C)

Schematic

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

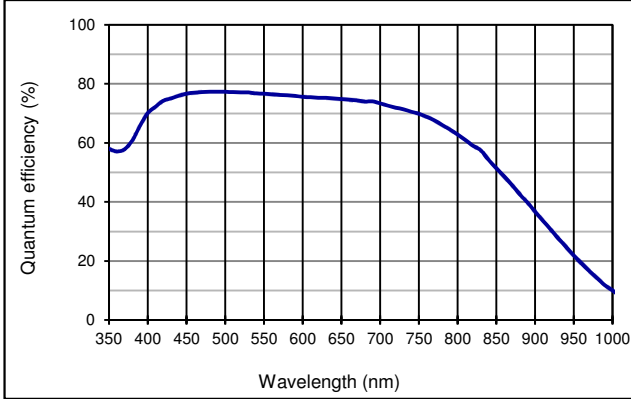
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 sales.opto@first-sensor.com

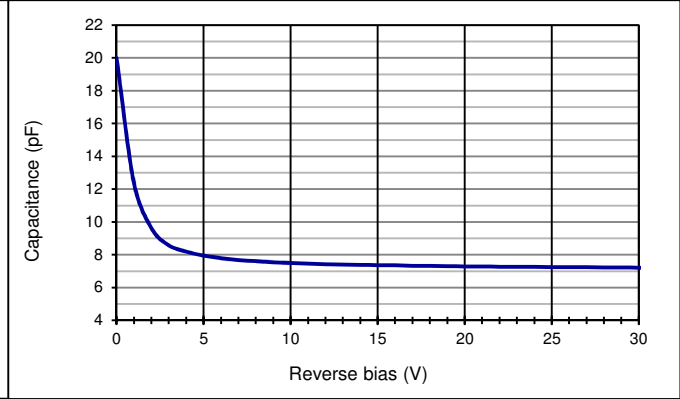
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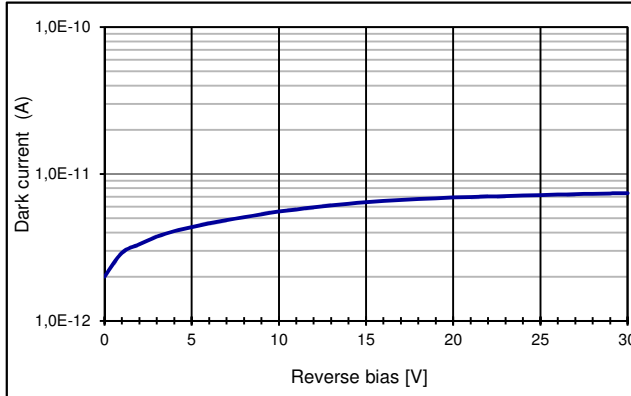
Quantum efficiency (23 °C)



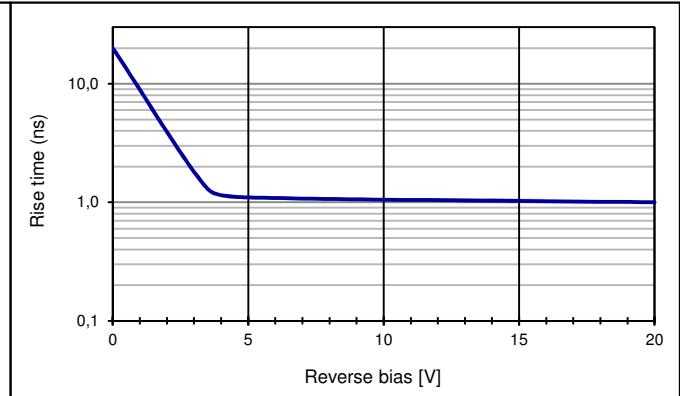
Capacitance as fct of reverse bias (23 °C)



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"

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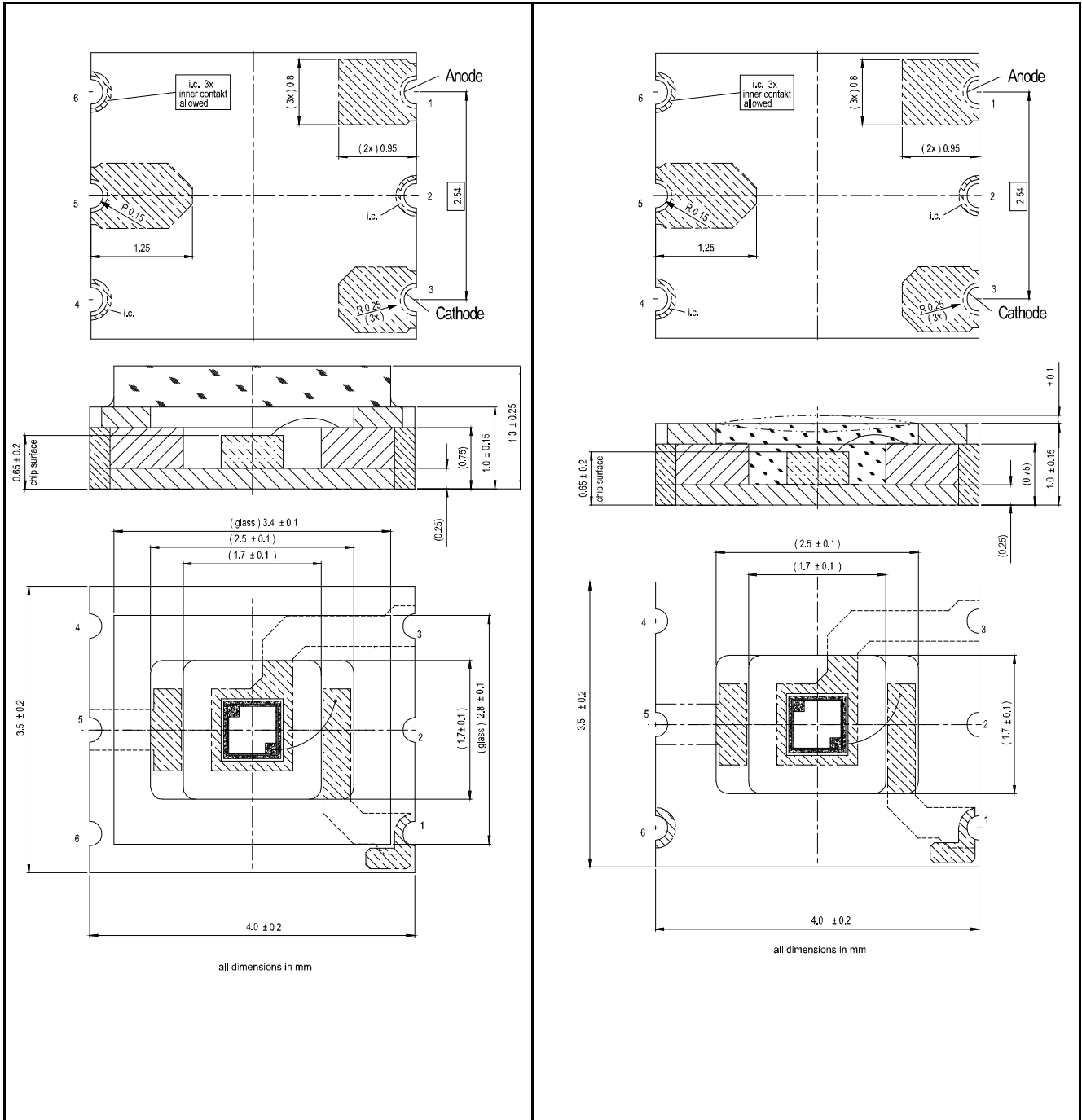


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Technical Drawing, Package: LCC6.1

LCC6.1G with glass cover # 501428

LCC6.1S with silicone potting on request



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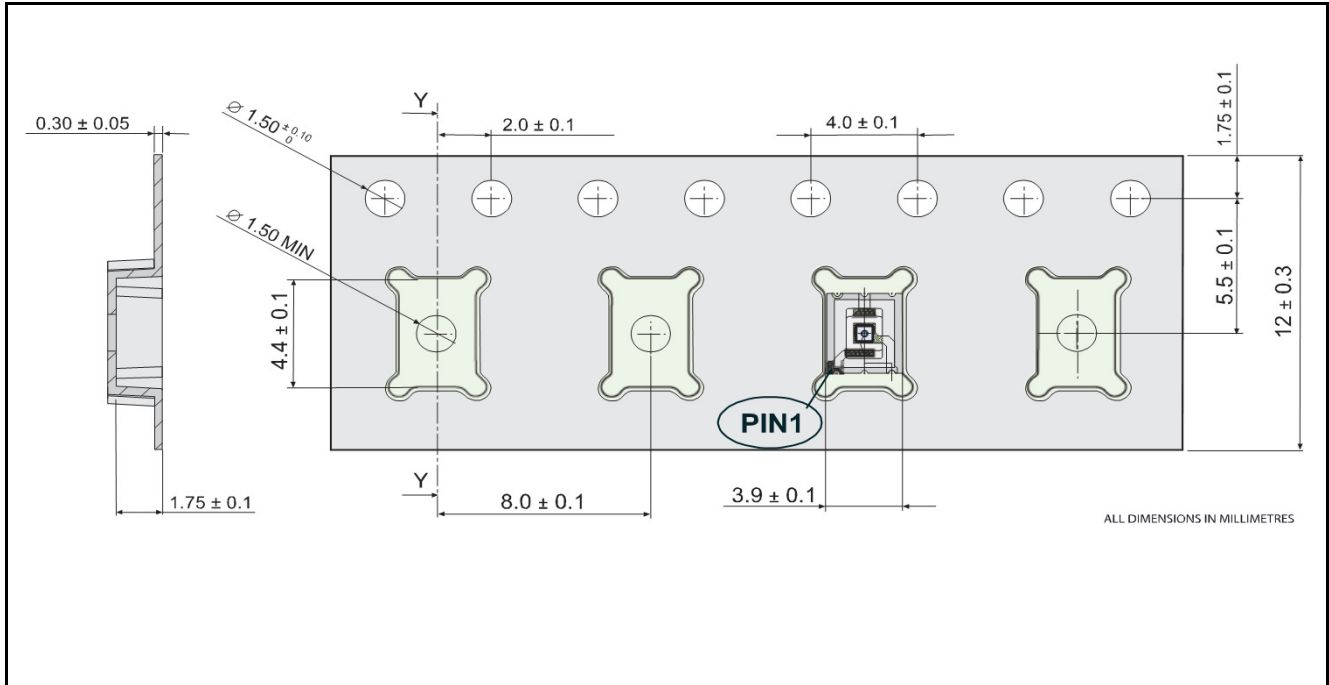
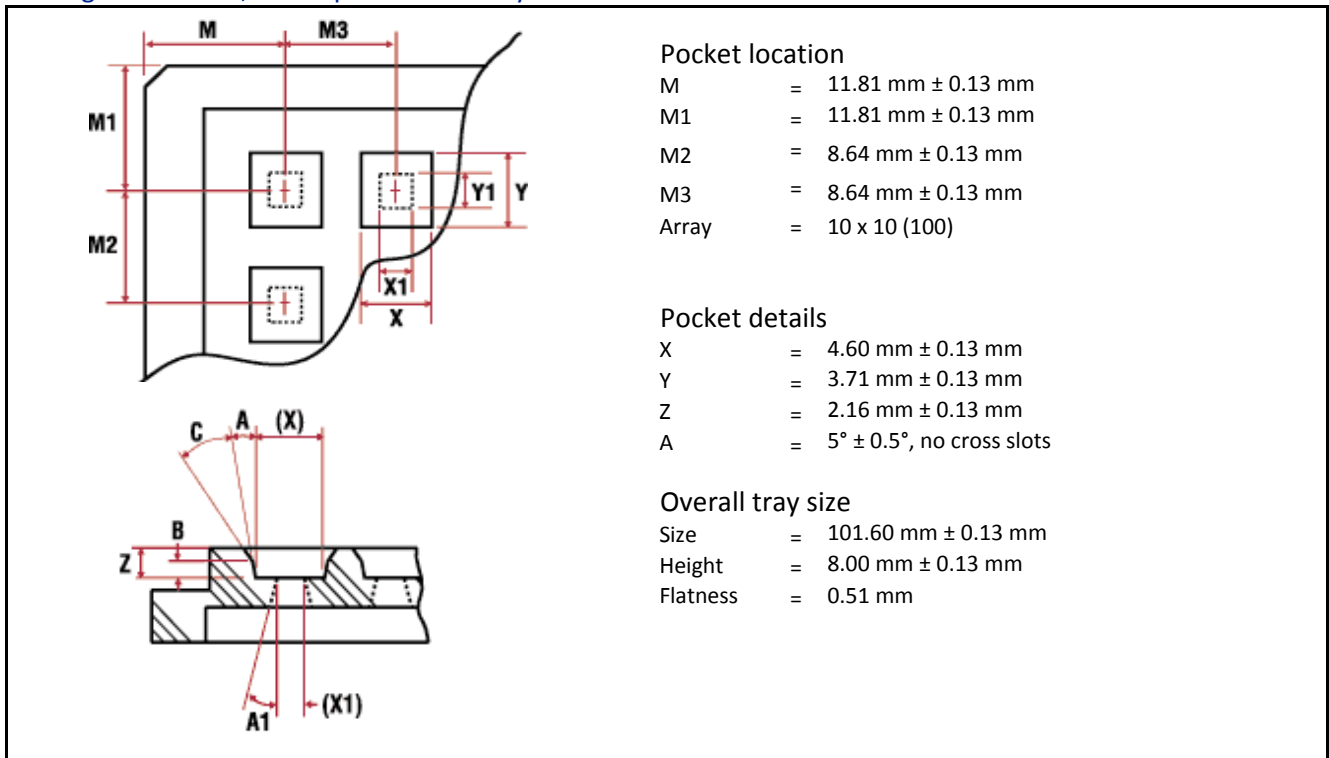


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Package dimension, large quantities on reel

Package dimension, small quantities in trays


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

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