
**Features**

- 840  $\mu\text{m}$  diameter active area
- Low dark current
- Fast response time
- High speed epitaxy
- Fully depleted at 3.5 V

**Description**

High speed epitaxy PIN photodiode with 0.55  $\text{mm}^2$  circular active area. Ceramic carrier type non hermetic SMD package with clear glass window (501125) or silicone potting (on request). Reflow solderable.

**Application**

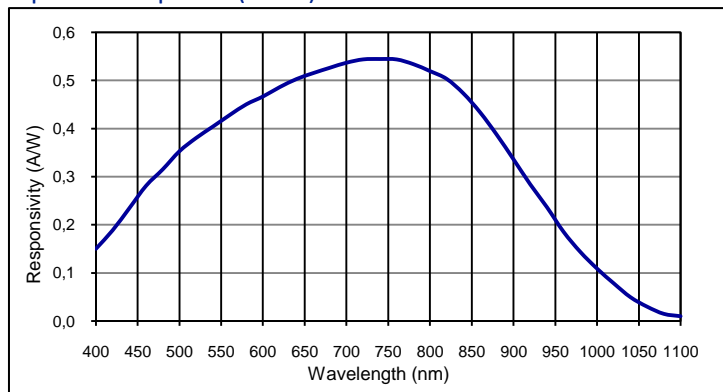
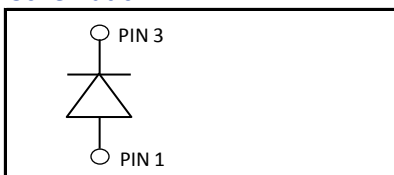
- Pulsed light detection
- High speed photometry
- High speed optical communications
- Fiber optic light monitoring

**RoHS**

2002/95/EC


**Absolute maximum ratings**

Symbol	Parameter	Min	Max	Unit
$T_{STG}$	Storage temp	-40	100	$^{\circ}\text{C}$
$T_{OP}$	Operating temp	-20	70	$^{\circ}\text{C}$
$V_{max}$	Max reverse voltage		20	V
$I_{PEAK}$	Peak DC current		10	mA

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

**Schematic**

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

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		diameter 840			$\mu\text{m}$
	Active area		0.55			$\text{mm}^2$
$I_D$	Dark current	$V_R = 3.5 \text{ V}$		0.01	0.1	nA
C	Capacitance	$V_R = 0 \text{ V}$		10		pF
C	Capacitance	$V_R = 3.5 \text{ V}$		4.4		pF
	Responsivity	$\lambda = 635 \text{ nm}$		0.49		A/W
	Responsivity	$\lambda = 800 \text{ nm}$		0.52		A/W
$t_R$	Rise time	$V_R = 3.5 \text{ V}; \lambda = 850 \text{ nm}; R_L = 50 \Omega$		1		ns
$V_{BR}$	Breakdown voltage	$I_R = 2 \mu\text{A}$	20	180		V
	Shunt resistance	$V_R = 10 \text{ mV}$		10000		$\text{M}\Omega$
	N.E.P.	$V_R = 3.5 \text{ V}; \lambda = 850 \text{ nm}$		4 E-15		$\text{W}/\text{Hz}$

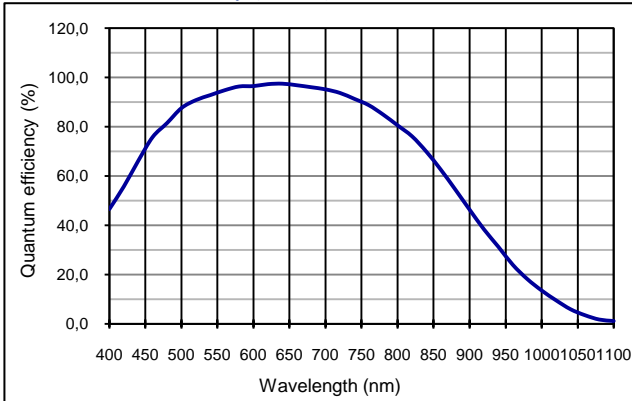
**European, International Sales:**


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 Peter-Behrens-Strasse 15  
 12459 Berlin  
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 sales.opto@first-sensor.com

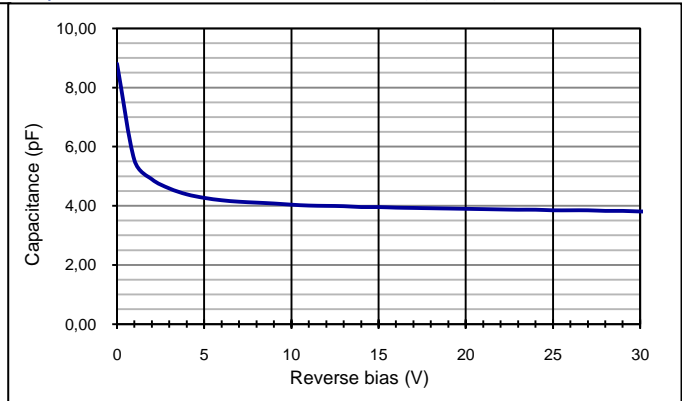
**USA:**


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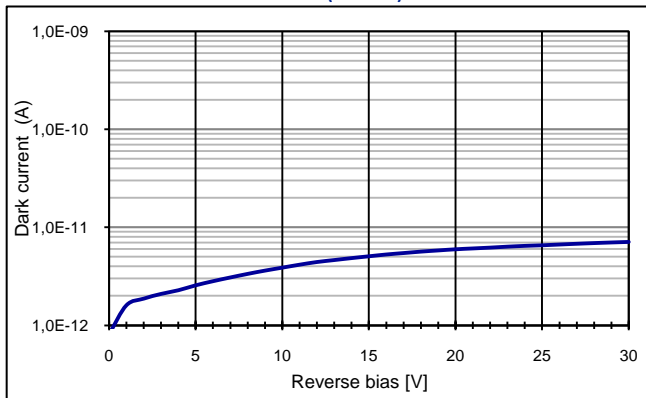
Quantum efficiency (23 °C)



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"

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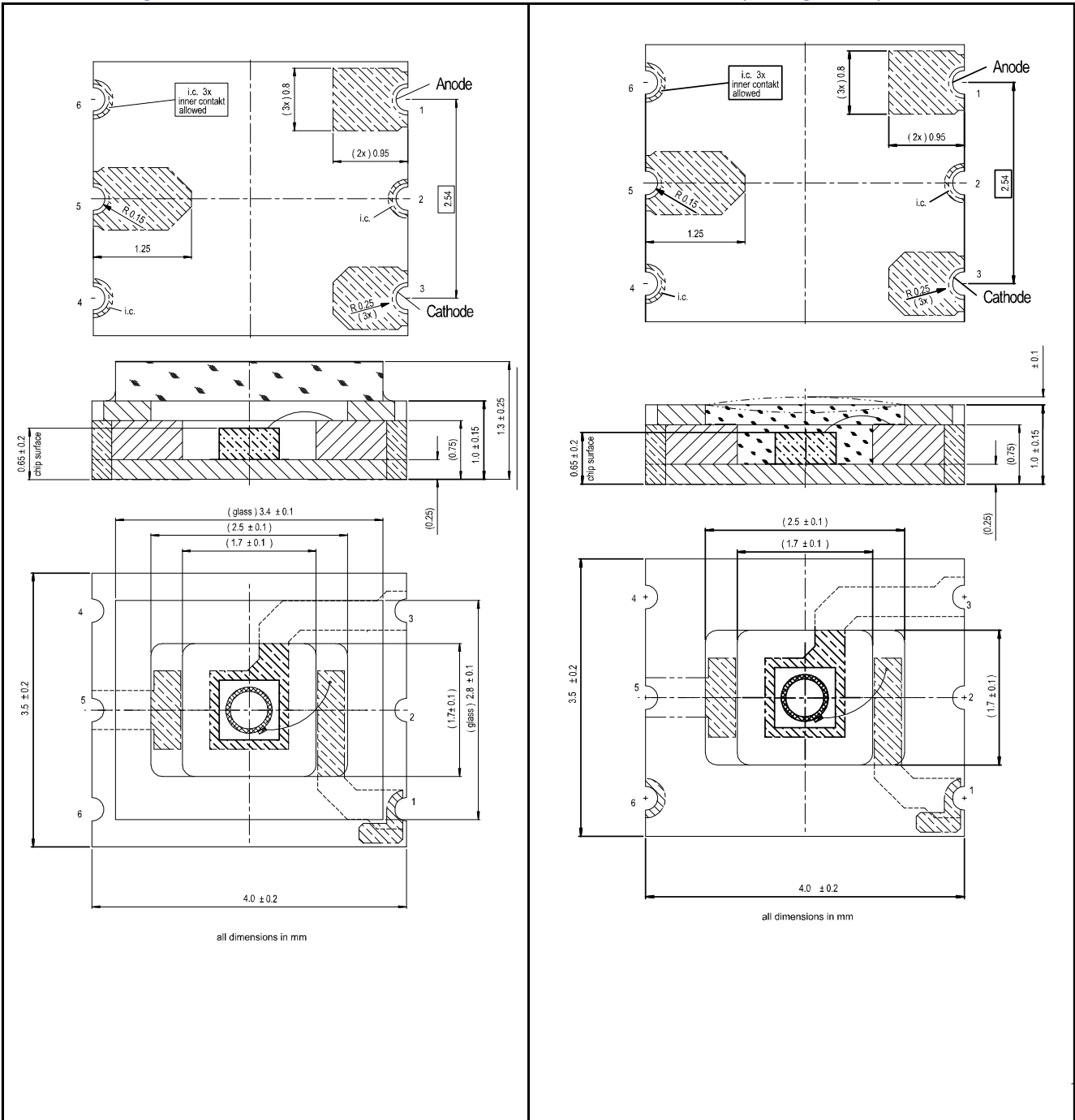


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Technical Drawing, Package: LCC6.1

LCC6.1G with glass cover # 501125

LCC6.1S with silicone potting on request



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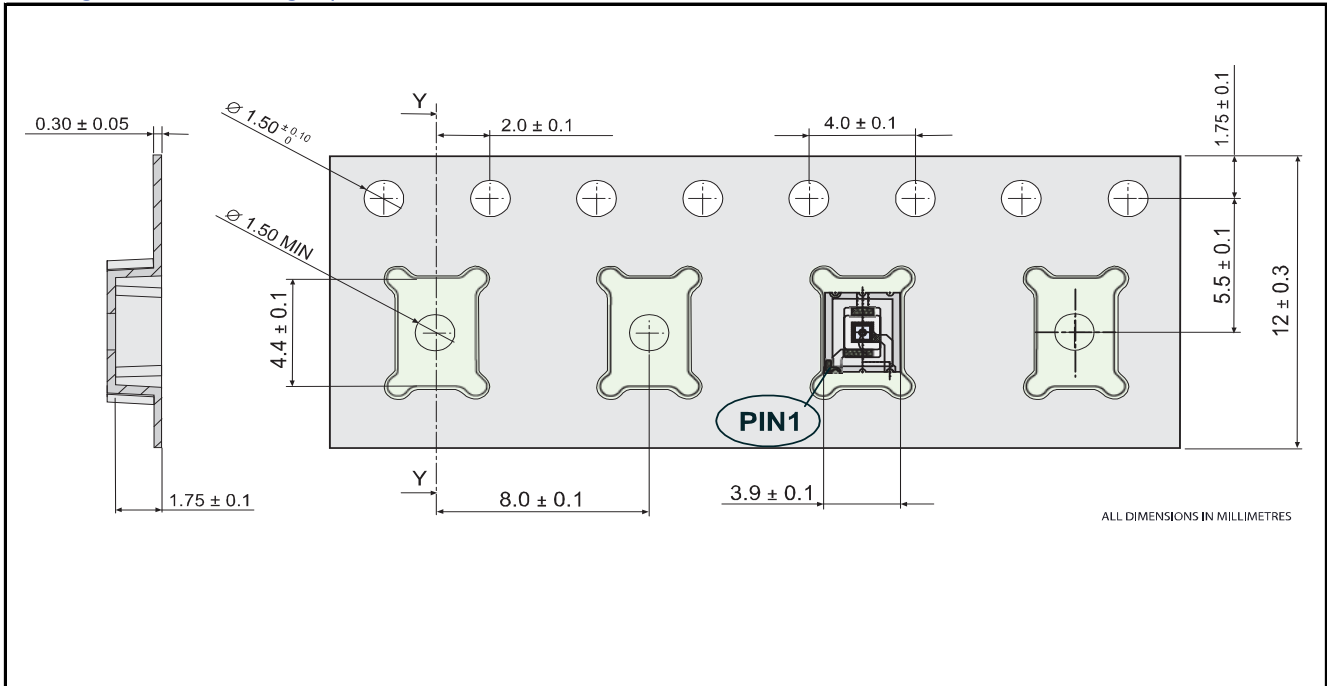
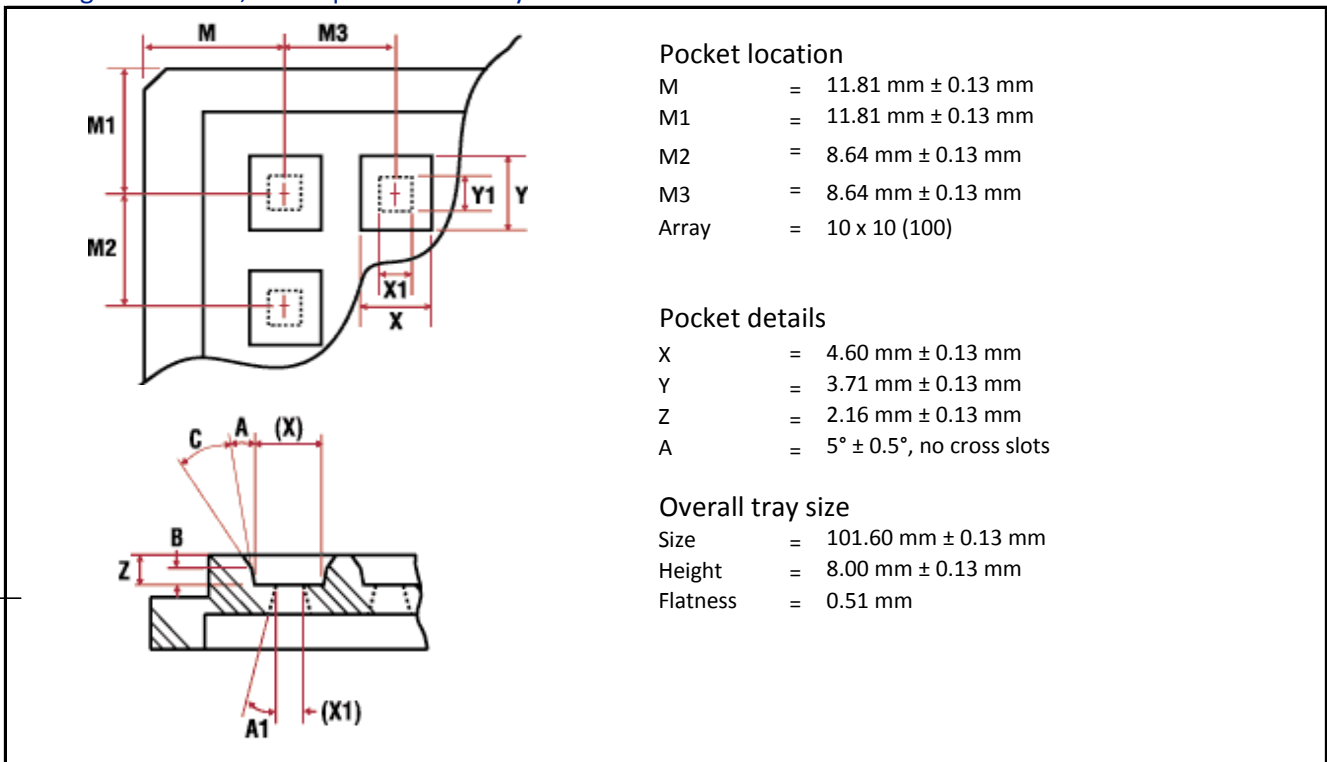


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**Package dimension, large quantities on reel**

**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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