

Quantum 



# MM 850nm 25Gbps PD (Top Illumination)

QZP25MM0850T101

QZP25MM0850T102

QZP25MM0850T103

*fight the world*



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## Description

The QuantumZ - **QZP25MM0850TX0X** is a top illuminated GaAs PIN photodiode chip has a 50um detection window and excellent performances, like low capacitance, high responsivity, low dark current, and reliability in field.

The device is available in singlet (1x1) or array configurations (1x4) and are compatible with wire-bonding and flip-chip bonding.

## Features

- High responsivity & data rates from DC to 25Gbps
- Low dark current, operating voltage & capacitance
- Topside anode & cathode configuration
- Available as single chip & 4 channel array
- Available application for COB & flip chip processes
- High humidity robustness compliant with GR-468
- Halogen & RoHS compliant

## Applications

- Smart cables & consumer applications
- Single channel & parallel fiber optical communication links

## Absolute Maximum Ratings

Parameter	Rating	Unit
Operating temperature	0 to 100	°C
Storage temperature	-40 to 125	°C
Mounting temperature (max. 10sec)	260	°C

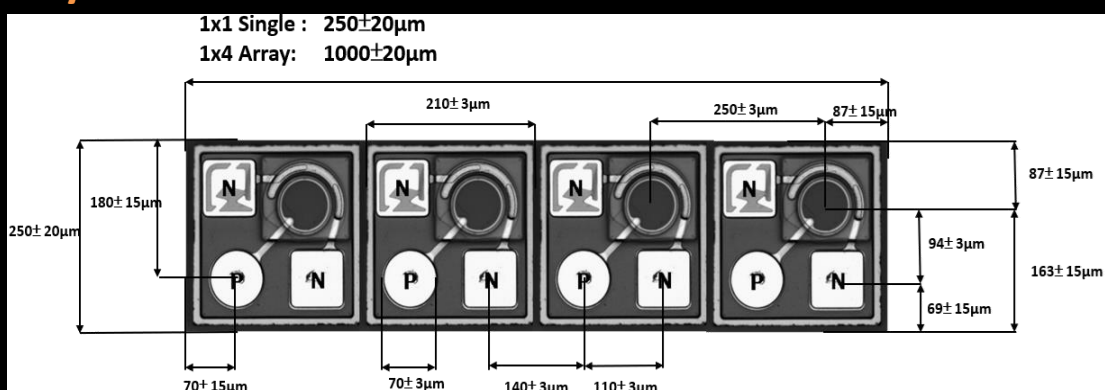
## Electro-Optic Characteristics

Parameter	Symbol	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
Aperture diameter	d			50		μm
Wavelength	λ		840	850	860	nm
Responsivity	R		0.55	0.6		A/W
Dark current	I <sub>d</sub>	U <sub>op</sub> =-2V			100	pA
Breakdown voltage	U <sub>BD</sub>	I=-10uA		-40		V
Capacitance	C	U <sub>op</sub> =-2V		100		fF
3dB-bandwidth	f <sub>3dB</sub>	U <sub>op</sub> =-2V	19	21		GHz

## Chip Outer Dimensions

Parameter	Min.	Typ.	Max.
Die length	225	250	275
Die width	225	250	275
Die height	125	150	175

## Chip Layout



P: p-contact (anode)

N: n-contact (common cathode)

## RoHS Compliance

QuantumZ insists, via continuous improvement in technology and experiences, to utilize non-hazardous materials for manufacturing green products that are in compliance with the regulation as well as customers' GP demands. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products.



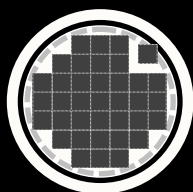
## Ordering Information

Product code	Data Rate	Description	Shipment Package
QZP25MM0850T101	25Gbps	Single PD chip	Diced wafer on metal lead frame (1)
QZP25MM0850T401	25Gbps	1x4 PD array	Diced wafer on metal lead frame (1)
QZP25MM0850T102	25Gbps	Single PD chip	Grip ring (2)
QZP25MM0850T402	25Gbps	1x4 PD array	Grip ring (2)
QZP25MM0850T103	25Gbps	Single PD chip	Gel-Pak (3)
QZP25MM0850T403	25Gbps	1x4 PD array	Gel-Pak (3)

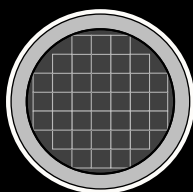
(1) Full diced 4" wafer on UV tape on metal lead frame Ø 230mm, electronic wafer map provided (standard high volume)

(2) Known Good Dies on UV tape on grip ring Ø 150mm (medium volume)

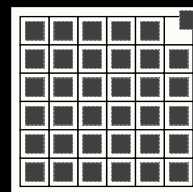
(3) Known Good Dies in 2" Gel-Pak (low volume)



Diced wafer on UV tape  
on metal lead frame



Grip ring



Gel-Pak