

Quantum 



MM 980nm 14Gbps PD (Top Illumination)

QZP14MM0980T101

QZP14MM0980T102

QZP14MM0980T103

fight the world



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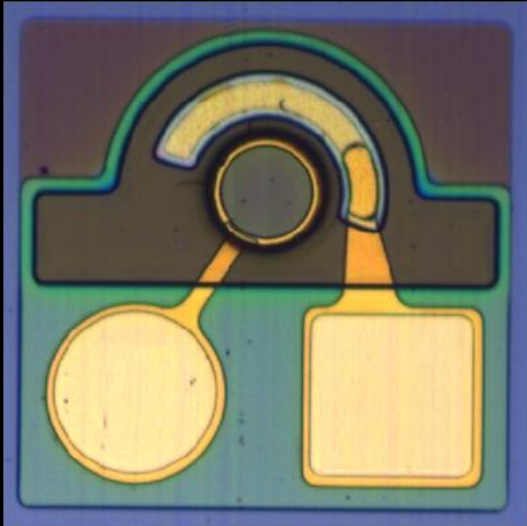
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Description

The QuantumZ - **QZP14MM0980TX0X** is a front-side illuminated InGaAs PIN photodiode chip has 64um 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 14Gbps
- 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 | | | 60 | | µm |
| Wavelength | λ | | 800 | 980 | 1100 | nm |
| Responsivity | R | | 0.55 | 0.6 | | A/W |
| Dark current | I _d | U _{op} =-2V | | | 150 | pA |
| Breakdown voltage | U _{BD} | I=-10uA | | -40 | | V |
| Capacitance | C | U _{op} =-2V | | 150 | | fF |
| 3dB-bandwidth | f _{3dB} | U _{op} =-2V | 10 | 12 | | GHz |



Chip Outer Dimensions

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

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.

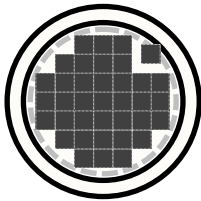
Ordering Information

| Product code | Data Rate | Description | Shipment Package |
|-----------------|-----------|----------------|--|
| QZP14MM0980T101 | 14Gbps | Single PD chip | Diced wafer on metal lead frame (1) |
| QZP14MM0980T401 | 14Gbps | 1x4 PD array | Diced wafer on metal lead frame (1) |
| QZP14MM0980T102 | 14Gbps | Single PD chip | Grip ring (2) |
| QZP14MM0980T402 | 14Gbps | 1x4 PD array | Grip ring (2) |
| QZP14MM0980T103 | 14Gbps | Single PD chip | Gel-Pak (3) |
| QZP14MM0980T403 | 14Gbps | 1x4 PD array | Gel-Pak (3) |

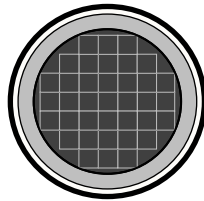
(1) Full diced 4" wafer on UV tape on metal lead frame Ø 230mm, electronic wafer map provided (standard high volume)

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

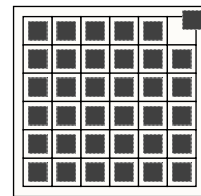
(3) Known Good Dies in 2" Gel-Pak (low volume)



Diced wafer on UV
tape on metal lead



Grip ring



Gel-Pak