

# GHz Resonant Optical Phase Modulator

(1-3.05 GHz, temperature control option)



DATASHEET

BUY NOW



## Features

- Solid-State
- High speed
- Ultra-high reliability
- Low insertion loss
- Compact

## Applications

- Optical blocking
- Configurable operation
- Instrumentation

The GHz Resonant Optical Phase Modulator provides high speed free space optical phase modulation based on an electro-optical technology. It integrates a resonance electrical circuit inside the package to facilitate low driving voltage. The device can be driven by a function generator. It further integrated TEC temperature controller for stable operation.

## Specifications

| Parameter                            | Min | Typical | Max  | Unit              |
|--------------------------------------|-----|---------|------|-------------------|
| Resonance Frequency                  | 1.1 |         | 3.05 | GHz               |
| Bandwidth                            |     | 3.8     |      | MHz               |
| Q Factor                             |     | 325     |      |                   |
| Required RF Power (1rad@400nm)       |     | 35      |      | dBm               |
| Max RF Power                         |     |         | 5    | W                 |
| Optical Aperture                     |     | 2.5x2.5 |      | mm <sup>2</sup>   |
| Max Optical Power                    |     |         | 1    | W/mm <sup>2</sup> |
| Optical Wavelength                   | 300 |         | 560  | nm                |
| Operating Temperature <sup>[1]</sup> |     | 5       |      | °C                |
| Storage Temperature                  | -40 |         | 85   | °C                |

[1] TEC actively cooled

**Note:** The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [\[click this link\]](#):

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Rev 08/12/24

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### Mechanical Dimensions (mm)

\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

### Ordering Information

| Prefix       | Type                          | Wavelength  | Resonance Frequency              | Polarizer                        | TEC             | 1 |
|--------------|-------------------------------|---|----------------------------------|----------------------------------|-----------------|---|
| <b>GHZM-</b> | Standard = 11<br>Special = 00 | 850 = 8<br>780 = 7<br>650 = 6<br>550 = 5<br>450 = 4<br>300 = 3<br>Special = 0 | 1.12 GHz = 112<br>3.05 GHz = 305 | No = 1<br>Yes = 2<br>Special = 0 | None=1<br>Yes=2 |   |

Red is special order.

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## Typical Speed and Repetition Measurement

Note: Top Traces are electrical; Bottom traces are optical

## Typical Bandwidth Measurement

## Amplitude Electro-Optic Crystal Configuration (yellow indicates electrode)

