

# 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](#):

**Legal notices:** All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 08/12/24

# GHz Resonant Optical Phase Modulator

(1-3.05 GHz, temperature control option)



## DATASHEET

### 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.

# GHz Resonant Optical Phase Modulator

(1-3.05 GHz, temperature control option)



## DATASHEET

### 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)

