

JENOPTIK

Integrated optical phase modulator

Fast phase modulation from visible to infrared spectral range with integrated optical solutions.

**SHARING EXCELLENCE**

The Integrated Optical Phase Modulator PMxxx is a compact fiber-coupled waveguide-based electro-optical modulator that works based on MgO:LiNbO<sub>3</sub> and LiNbO<sub>3</sub> crystals. Providing fast electrooptical response, it allows phase modulation with frequencies as high as the Gigahertz range. Available modulators can handle wavelengths in the visible and the infrared spectral range.

Standard-designed modulators use polarization maintaining single mode fibers to couple the light in and out. They may also be configured with fiber systems or connectors of different types.

#### Benefits

- Application in the VIS or IR spectrum
- High modulation frequencies
- Single mode fiber coupling
- Low modulation voltage

#### Applications

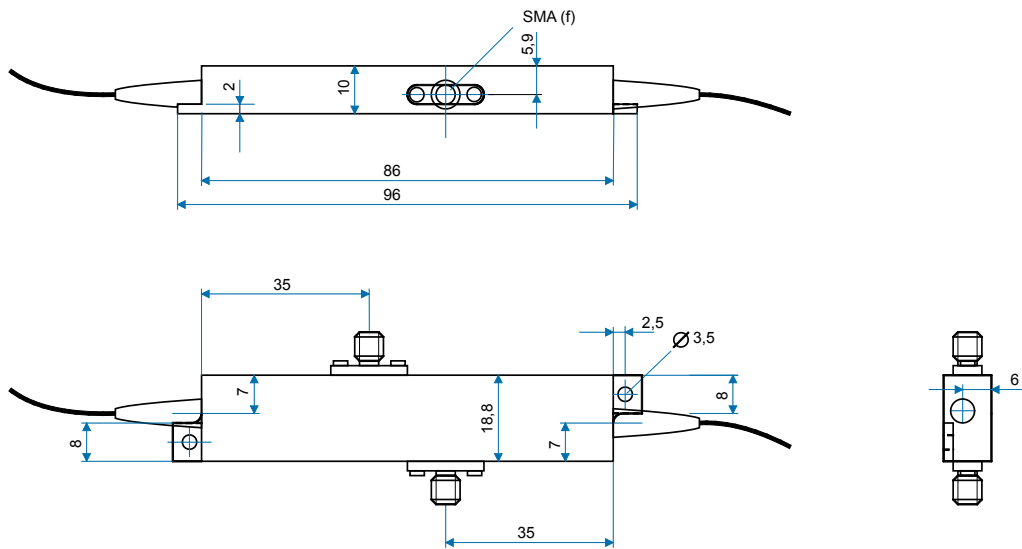
- Analog and digital modulation
- Sideband generation
- Interferometric metrology
- Optical coherence tomography

# Waveguide-based electro-optical light modulator

## Integrated optical phase modulator PMxxx

### Specifications

	PM635	PM705	PM830	PM1064	PM1550
Wavelength [nm] Other wavelengths on request	635	705	830	1064	1550
Spectral bandwidth [nm]	± 20	± 20	± 30	± 40	± 50
Insertion loss, typical [dB]	6	5	5	4	3
Minimum optical rise time 10/90, typical	200 ps	200 ps	200 ps	200 ps	200 ps
Optical connection, input Standard Fiber connector	Polarization maintaining single mode fiber Bare fiber, FC/PC connector or FC/APC connector				
Optical connection, output Standard Optional Fiber connector	Polarization maintaining single mode fiber Single mode or multi mode fiber Bare fiber, FC/PC or FC/APC connector				
Half wave voltage, typical	5 V	5 V	4.5 V	6 V	10 V
Maximum optical input power (cw)	20 mW	20 mW	50 mW	300 mW	300 mW
Dimensions L x W x H (housing, without fiber feed-through)	96 mm x 19 mm x 10 mm				



Dimensions phase modulator (mm)

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.