

MORE LIGHT

Integrated optical phase modulator PMxxx

## Waveguide-based electro-optical light modulator

The Integrated Optical Phase Modulator PMxxx is a compact fiber-coupled waveguide-based electro-optical modulator that works based on  $\text{MgO:LiNbO}_3$  and  $\text{LiNbO}_3$  crystals. Providing fast electrooptical response, it allows phase modulation with frequencies as high as the Giga-hertz 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

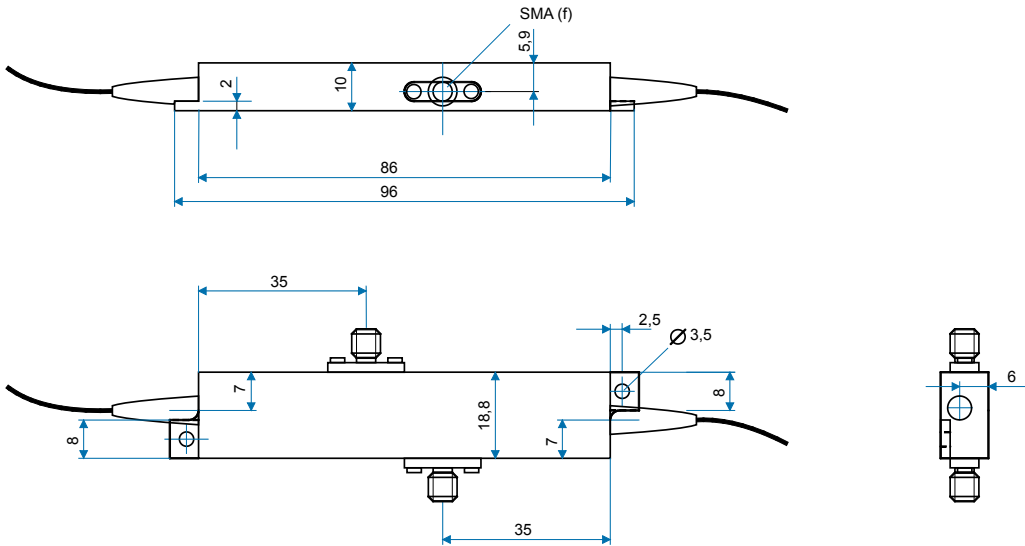
# Waveguide-based electro-optical light modulator

## Integrated optical phase modulator PMxxx

### Specifications

	PM635	PM705	PM830	PM1064	PM1550
Wavelength [nm]	635	705	830	1064	1550
Other wavelengths on request					
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				

\* Standard: bow-tie-type, optional: Panda-type  
 \*\* Standard: wide-key connector, optional: small-key connector



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.

