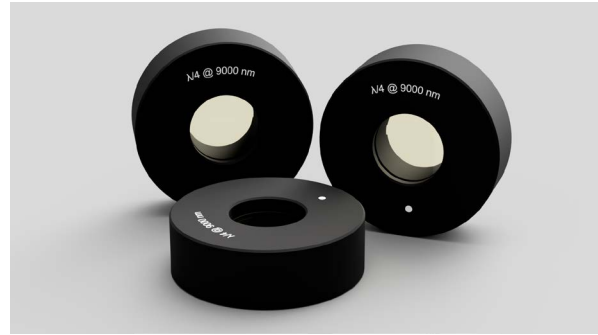


Mid-infrared (MIR) waveplates



4Lasers provide unique zero-order, monolithic design mid-infrared (MWIR and LWIR) waveplates mounted in $\varnothing 25,4 \times 6$ mm black anodized metal mount for the range of 2800 nm - 10600 nm. These waveplates are available with quarter-wave, half-wave or any other

custom retardance. Each MWIR and LWIR waveplates designed for a particular wavelength in the range from 3500 nm to 1060 nm are antireflective coated, while each 2800 nm - 3000 nm waveplates are uncoated.

Main features

- Zero-order, monolithic design
- Operating wavelength selection from 2800 nm to 10600 nm
- Mounted in $\varnothing 25,4 \times 6$ mm black anodized metal mount
- $\varnothing 6$ mm and $\varnothing 10$ mm standard clear apertures
- Custom size, operating wavelength available upon request

Application examples

- Linear-to-circular polarization transformation and vice versa
- Linear polarization rotation
- Optical isolation

Standard specifications

MID-IR WAVEPLATES	
Type	Zero-order, monolithic
Available operating wavelength range	2800 nm - 10600 nm
Retardation tolerance	$\sim \lambda/50 @ 20^\circ \text{C}$
Clear aperture	$\varnothing 6$ mm and $\varnothing 10$ mm
Parallelism error	< 1 arcmin
Surface quality	60-40 S-D
Coatings	Antireflective coating [R<1%] on each surface or uncoated
Laser induced damage threshold	2 J/cm ² @ 9000 nm, 10 ns (for 9000nm waveplates)
Mount	Mounted in $\varnothing 25,4 \times 6$ mm black anodized metal mount

Standard products

CLEAR APERTURE	RETARDATION	COATINGS	WAVELENGTH	SKU	PRICE
$\varnothing 10$ mm	$\lambda/2$	Uncoated	3000 nm	13219	455 €
			3500 nm	8175	455 €
			4000 nm	8177	455 €
			4500 nm	8179	455 €
			5000 nm	8181	455 €
		6000 nm	8185	455 €	
		6500 nm	8187	455 €	
		7000 nm	8189	455 €	
		7500 nm	8191	1280 €	
		8000 nm	8193	1280 €	
	8500 nm	8195	1280 €		
	9000 nm	8197	1280 €		
	9500 nm	8199	1280 €		
	10000 nm	19791	1280 €		
	10600 nm	19793	1280 €		
	$\lambda/4$	Uncoated	3000 nm	13220	455 €
			3500 nm	8174	455 €
			4000 nm	8176	455 €
			4500 nm	8178	455 €
			5000 nm	8180	455 €
5500 nm		8182	455 €		
6000 nm		8184	455 €		
6500 nm		8186	455 €		
7000 nm		8188	455 €		
7500 nm		8190	1280 €		
8000 nm	8192	1280 €			
8500 nm	8194	1280 €			
9000 nm	8196	1280 €			
9500 nm	8198	1280 €			
10000 nm	19790	1280 €			
10600 nm	19792	1280 €			

CLEAR APERTURE	RETARDATION	COATINGS	WAVELENGTH	SKU	PRICE
$\varnothing 6$ mm	$\lambda/2$	AR coated	7500 nm	19893	640 €
			8000 nm	19894	640 €
			8500 nm	19895	640 €
			9000 nm	19896	640 €
			9500 nm	19897	640 €
			10000 nm	19898	640 €
	10600 nm	19899	640 €		
	$\lambda/4$	AR coated	7500 nm	19901	640 €
			8000 nm	19903	640 €
			8500 nm	19904	640 €
			9000 nm	19905	640 €
			9500 nm	19908	640 €
			10000 nm	19909	640 €
			10600 nm	19910	640 €