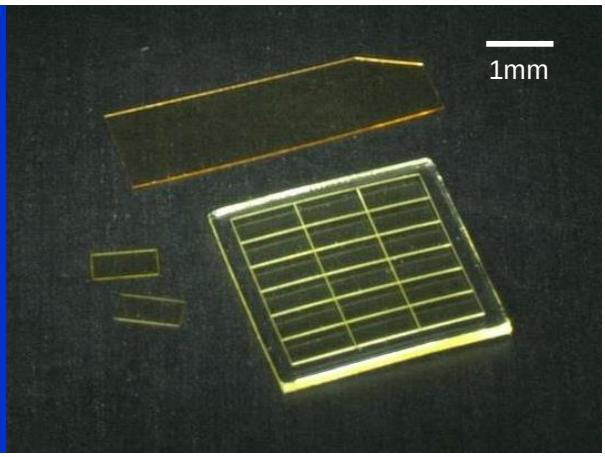
Highly reliable, very-thin wave plate with arbitrarily shape for polarization control in high density optical circuit

Polyimide Quarter-Wave Plate

AT-QWP

The AT-QWP polyimide quarter-wave plate is made of flexible polyimide film, which is excellent in heat and environment resistance.
It is thin and easy to handle, so it is optimal as a wave plate to be inserted into an optical circuit.



Polarization Conversion

Convert linearly polarized light to circularly polarized light.
Combined with a polarizer, or the like, it can be applied to optical isolation, polarization measurement, etc.

Low Insertion Loss

Very-thin 15μm type.
Since it is transparent at the transmission wavelength, there is almost no transmission loss.

Any Size or Shape

Miniaturization (minimum 250 x 250μm) and free shape are also possible.
Made of easy-to-cut film, so you can freely design size and shape.

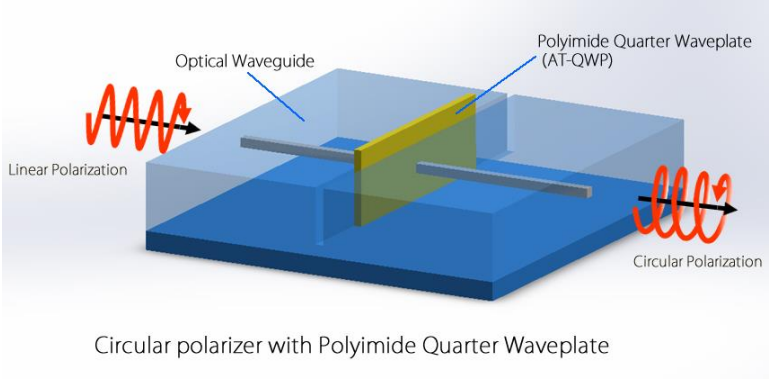
Specifications

* Based on NTT Advanced Technology measurements.

Type	AT-QWP Polyimide Quarter-Wave Plate
Extinction Ratio*	0 ±1 dB (@1550 nm)
Thickness*	15 ±2μm
Size	0.25 x 0.25 mm ～ 3 x 5 mm (Dimension and aspect ratio can vary with this range upon consultation)

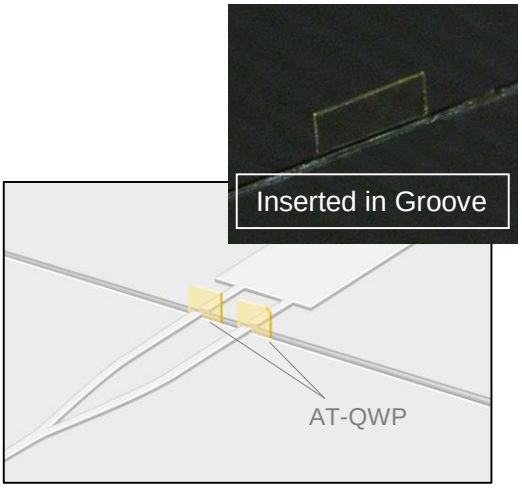
Applications

Polarization control for polarization beam splitter (PBS), etc.



Circular polarizer with Polyimide Quarter Waveplate

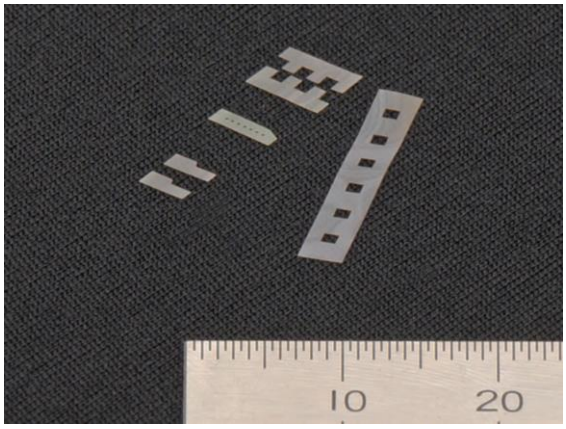
Convert linearly polarized light to circularly polarized light

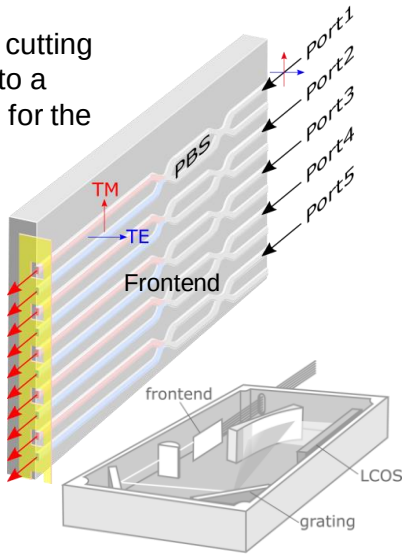


Example of PBS Optical Circuit Application

Free Size and Shape

Polyimide film can be processed into an arbitrary shape using precision cutting technology. It can be processed to any shape including a free curve up to a size of 0.25 mm ~ 3 mm in length. We can provide it in a shape suitable for the application (please contact us for details).





Used as a front end for a wavelength selective switch

Recommended optical adhesive

AT8224 (UV Curing Type)

UV Irradiation: 10mW/cm^2 ,5min
Refractive Index @ 589 nm: 1.51

※ We can also discuss about other adhesives according to your request.

We support handling of polyimide wave plate.

Please inquire about handling, including safe insertion into optical circuits and fixing with optical adhesive.
NTT-AT experts are happy to support the safe handling of polyimide wave plate.

For more information http://www.ntt-at.com/product/Waveplate/

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