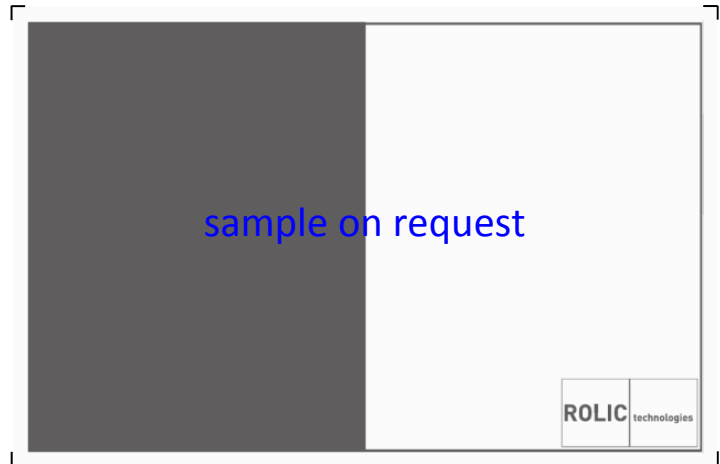


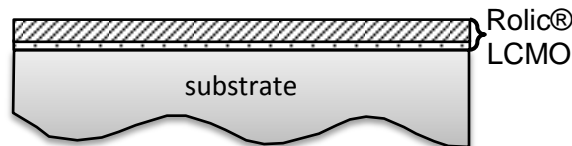
Rolic® LCMO Demonstrator:

LCMO Retarder (QWP)

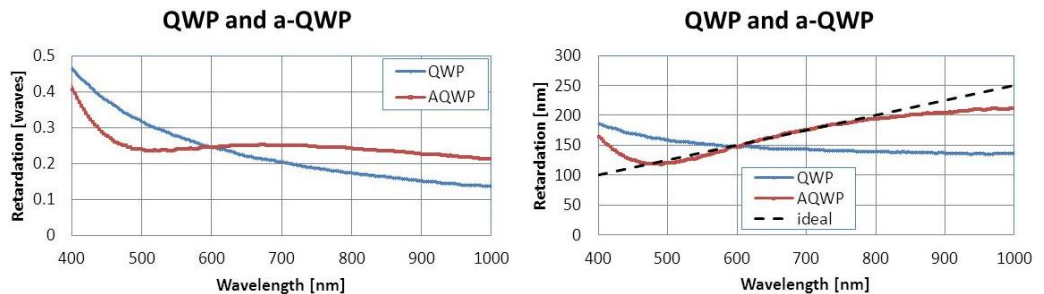


Description	Rolic® LCMO retarders are coated and therefore much thinner than conventional wave plate (WP) foils. Retarders for any target wave length. In the visible spectrum this is typically @550nm, but we can also optimize e.g. for NIR.
Features	Rolic® film patterned retarder are produced using the Rolic® LCMO (Light Controlled Molecular Orientation) technology, which is photo alignment of Linear Photo Polymerization materials (LPP) and subsequent orientation of Liquid Crystal Polymers (LCP).
	This technology enables: <ul style="list-style-type: none"> • combination with other LCMO-optical films • wide substrate choice (also glass) • thin compared with standard QWP films • retardance adjusted to the specific requirements of the application.

Stack design: WP Retarder



Optical characterization:



Rolic® LCMO Demonstrator:

LCMO $\lambda/4$ Retarder (QWP)

Properties of Demonstrator:	Substrate	TAC (Cellulose Triacetate)
	Total thickness	<52 μm
	Substrate thickness	50 μm
	Coating thickness	<2 μm
	Transmission	>95 % @ 550 nm
	Retardation	$\lambda/4$ @ 550 nm
Life-time	Optical films produced with Rolic's LCMO technology will maintain their orientation even under thermal stress, high humidity and exposure to intensive visible light.	
Customization	While the demonstrators have been designed to showcase the application of Rolic LCMO technology as $\lambda/4$ retarders, the same technology can be used for customized solutions when a different retardation is required.	
Range of properties:	Substrate	any substrate (any chemistry, any thickness, rigid, flexible)
	Transmission	>95% @ 550 nm
	Retardation	adjustable to application e.g. $\lambda/4$ (QWP), $\lambda/2$ (HWP) or λ/x (any value) optimized for a desired wavelength range

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