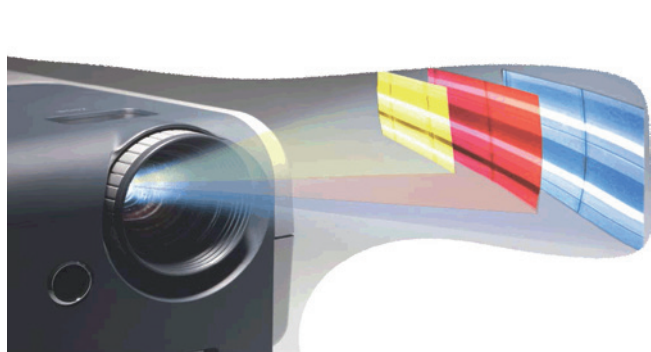


Absorptive polarizer ABS series



Moxtek polarizers are recognized for enabling projector brilliance in brightness and color

Applications

- Projection displays
- Polarizing modulators
- Polarizing cameras
- Analytical systems
- Automotive

ProFlux® ABS series absorptive polarizers are optimized to absorb unwanted RGB light bands, reducing stray light and thermal loading caused by back reflections common in LCD projection displays. These inorganic polarizers are precision manufactured in high volumes using Moxtek's advanced NanoStack® technology and are ideal for many applications, including: high temperature projection displays, analytical systems, automotive, medical, research, and other applications. Our wire grid polarizers are available in various sizes and shapes in both bare glass or in mounted forms.

Features	Benefits
Nanowire® technology	Brightness and contrast uniformity
	±20° AOI without depolarization
Inorganic	High heat resistance
	Long life compared to organic polarizer
Absorptive	Extremely low reflection
	Reduced thermal load to LCD panel

Standard product options	
Product name	Description
ABB08C	High contrast (blue)
ACB5XSEC	Balanced transmission/contrast (blue)
ABBS5C	High transmission (blue)
ABG08C	High contrast (green)
GCG8LGER	Balanced + overcoat (green)
ABGS5C	High transmission (green)
ABR08C	Balanced transmission/contrast (red)
GCH8XCEC	High contrast broadband (RGB)
SCG8XSEC	High contrast (green) (Double-sided ABS)

General specifications	
Wavelength ranges	420 – 500 nm, 500 – 590nm, 610 – 680 nm
Substrate type	Display grade glass
Thickness	0.7 mm ± 0.07
Index of refraction	1.5198 @ 435.8 nm 1.5078 @ 643.8 nm
Thermal expansion	31.7 × 10 ⁻⁷ /°C (0 – 300 °C)
AOI (Angle of incidence)	0° ± 20°
AR coating	420 – 700 nm visible AR coating
Maximum temperature	250 °C > 5000 hours
Transmission axis (TA)	Referenced to long side of part
TA tolerance	± 1°
Dimensional tolerance	± 0.2 mm
Edge exclusion	2 mm
RoHs	Compliant

Absorptive polarizer ABS series

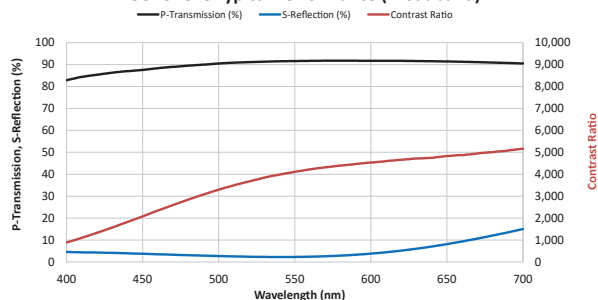
Performance specifications at normal incidence													
Product	Description	blue (420 - 500 nm)				green (500 - 590 nm)				red (610 - 680 nm)			
		Tp% (min)	Ts% (max)	Rp% (max)	Rs% (max)	Tp% (min)	Ts% (max)	Rp% (max)	Rs% (max)	Tp% (min)	Ts% (max)	Rp% (max)	Rs% (max)
ABB08C	High contrast (blue)	87	0.1	6	10	-	-	-	-	-	-	-	-
ACB5XSEC	Balanced trans./contrast (blue)	90	0.2	6	13	-	-	-	-	-	-	-	-
ABBS5C	High transmission (blue)	91	0.3	6	10	-	-	-	-	-	-	-	-
ABG08C	High contrast (green)	-	-	-	-	89	0.05	6	10	-	-	-	-
*GCG8LGER	Balanced + overcoat (green)	-	-	-	-	89	0.15	6	10	-	-	-	-
ABGS5C	High transmission (green)	-	-	-	-	92	0.3	6	13	-	-	-	-
ABR08C	Balanced trans./contrast (red)	-	-	-	-	-	-	-	-	90	0.05	6	19
GCH8XCEC	High contrast broadband (RGB)	-	-	-	-	89.5	0.1	4	7	90	0.1	6	10
SCG8XSEC	High contrast (green) (Double-sided ABS)	-	-	-	-	86	.05	6	10	-	-	-	-
		WGP side down			15	WGP side down			10	WGP side down			10

Tp- Transmitted "p" polarization, Ts- Transmitted "s" polarization, Rp- Reflected "p" polarizer, Rs- Reflected "s" polarizer
 *GCG8LGER has a protective Overcoat™ hard coating to protect the polarizer ribs. See Tech note OPT-TECH-1013 for details.

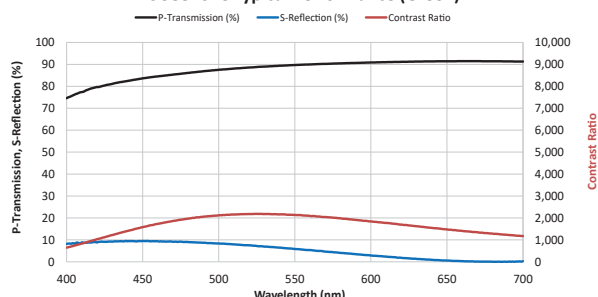
Typical optical performance (Tested at 0°)

GCH8XCEC is Moxtek's first broadband absorptive polarizer designed for uniform performance across the visible spectrum at angles up to $\pm 20^\circ$.

GCH8XCEC Typical Performance (Broadband)

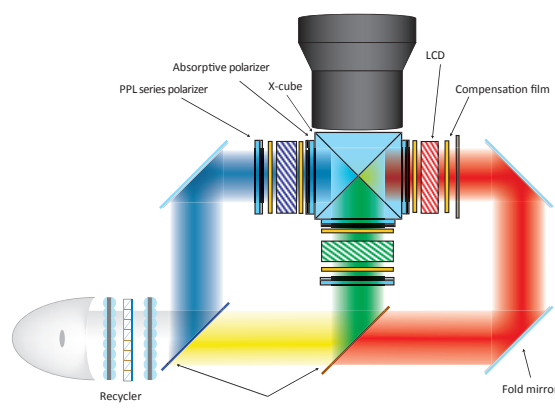


SCG8XSEC Typical Performance (Green)



Projection display application design example

Absorptive polarizers are channel specific (RGB) and designed for demanding applications that require high transmission, high contrast, and low Rs. See the example below of a 3LCD projection application:



3LCD Projector design