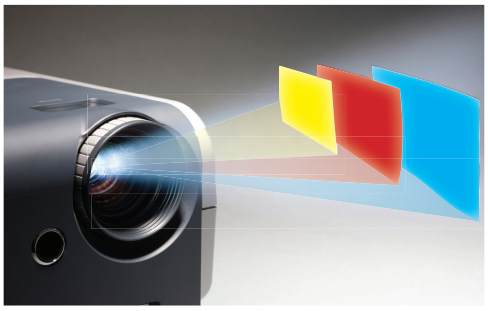
Optics

Inorganic Absorptive Polarizer

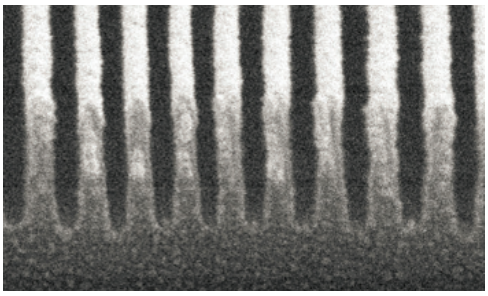
Datasheet



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

Applications

- Projection Displays
- Polarizing Modulators
- Can be laminated with retarding films



Moxtek 100nm Gen 5 polarizers have improved performance and durability.

ProFlux® polarizers are designed using Moxtek® Nanowire® Technology to optimally control light and image polarization. These polarizers are compatible with high energy and high temperature environments. Standard ProFlux polarizers are reflective, which limits usage to pre-imager positions in the light engine. Our ABS series of inorganic Absorptive Polarizers offer the durability of inorganic with the design flexibility of absorptive, truly the best of both worlds.

Absorptive series polarizers are color specific for the red, blue and green light channels and are specifically developed for applications that are narrow band and back reflection sensitive.

Moxtek's advanced manufacturing technology enables precision built polarizers in high volume quantities for use in projection display, analytical, automotive, medical, research, and many other applications.

Features	Benefits
Nanowire Technology	Brightness and contrast uniformity
	>20˚ half angle without performance loss
	Wavelength and AOI independent
Inorganic	High reliability
	High heat resistant
Absorptive	Extremely low reflection

Substrate Specifications

Type: Display Grade Glass
Thickness: 0.7mm ± 0.07
Index of Refraction: 435.8nm: 1.5198
643.8nm: 1.5078
Thermal Expansion: 31.7 x 10^{-7}/°C (0-300°C)

General Specifications

Wavelength Range: 450nm, 550nm, 650nm, +/- 20
AR Coating: Standard on the backside only
Dimensional Toler- ± 0.2mm
ance: 2mm
Edge Exclusion: Referenced to long side of part
Transmission Axis ± 1˚
(TA): 0˚± 20˚
TA Tolerance: 200˚C > 5,000 hours
Angle of Incidence: Compliant

MOXTEK®

ProFlux Nanowire® Technology

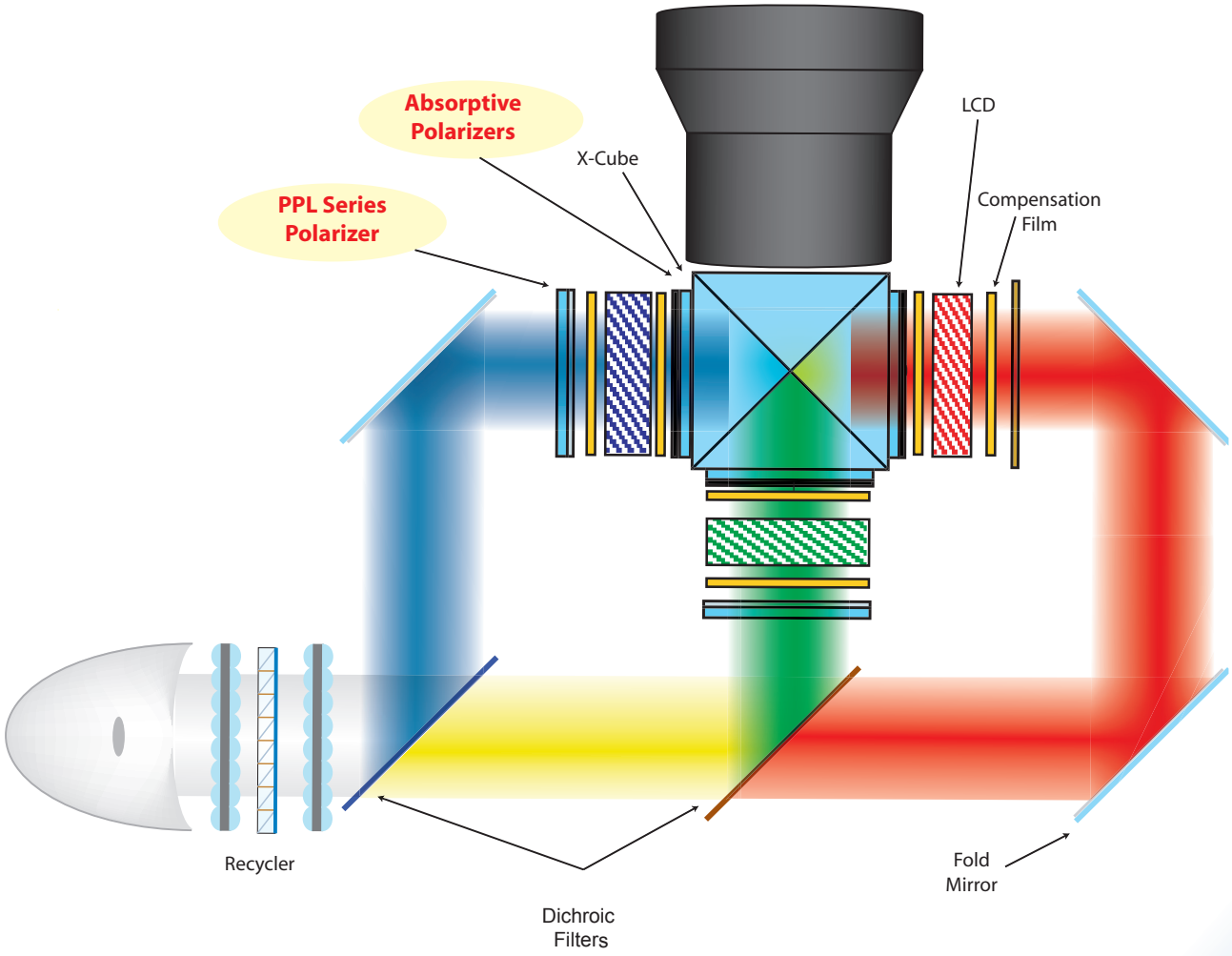
Subject to technical change without notice

High Performance Absorptive Data

		Min Tp%	Max Ts%	**Max Rs%**
Blue Channel	High Transmission	85	0.3	**15**
	High Contrast	78	0.05	**13**
Green Channel	High Transmission	89	0.3	**19**
	Balanced	85.5	0.09	**15**
	High Contrast	84.5	0.05	**12**
Red Channel	Balanced	78	0.03	**12**

Application Design

With the Absorptive polarizers being channel specific, designing them into the application as the clean-up polarizer reduces the reflected s-polarization into the light path while taking advantage of the extreme durability offered by the inorganic composition to enable high lumens and increased brightness applications.



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