

ACRYLIC NIR/NEAR INFRARED FILTERS

PRODUCT INFORMATION

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PHILLIPS SAFETY
PRODUCTS INC.

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ACRYLIC NIR/NEAR INFRARED FILTERS



The Acrylic NIR/Near Infrared Filters transmit Near Infrared (IRT) light and absorb visible light. There are 6 types of Near Infrared filters that transmit through the ranges of 670nm to 910nm.

APPLICATIONS – Instrumentation, Sensors, Communications and Optical Devices, LIDAR filters, Machine-Vision, Time of Flight Sensors, Covert Imaging & Illumination

THICKNESS – 0.5, 0.6, 0.7, 0.8, 1.0, 1.2, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0mm

SIZE – 400mm x 550mm standard. Custom sizes are available upon request.

MACHINING / PRINTING – Available to customer specification.

SPECIFICATION

Excellent optical characteristics

No double refraction

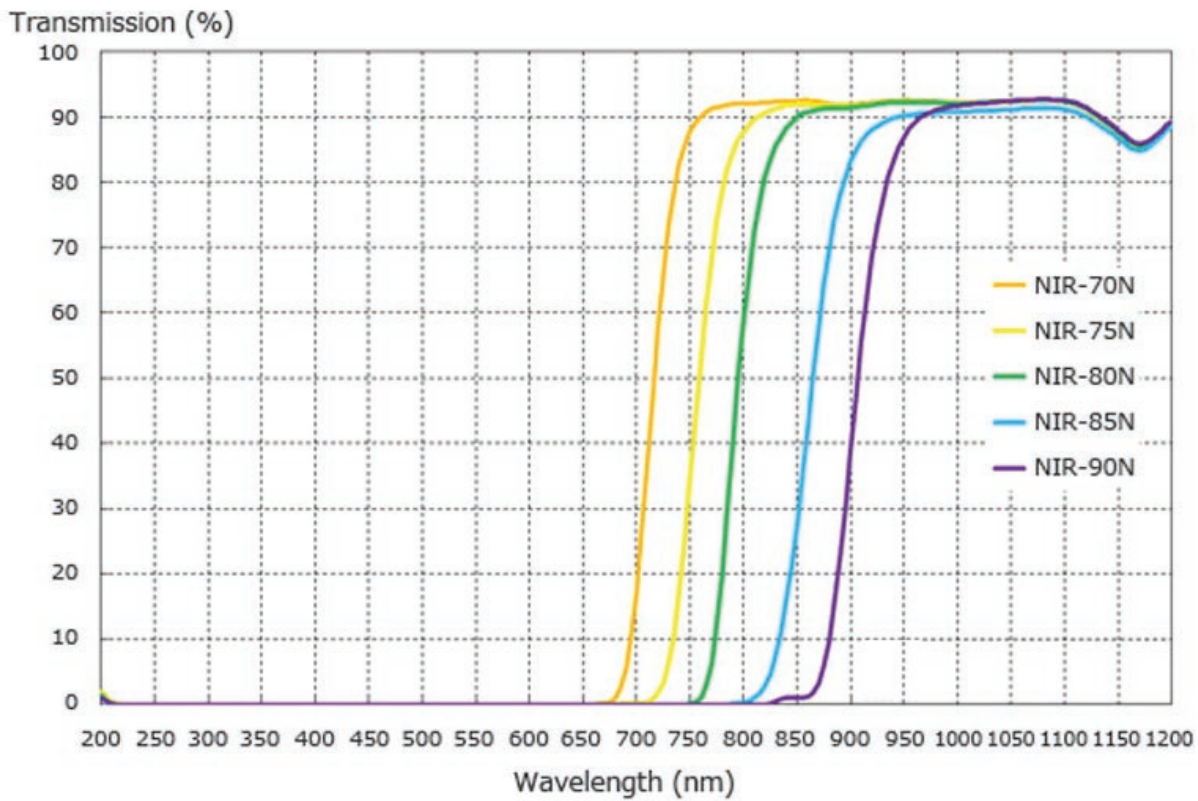
Available scratch-resistant

Transmit Near Infrared light and absorbs visible

Available smooth surface or anti-glare surface

Available with custom-tuned antireflection coating

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※ These are our experimental measured values in 1.0mm thick.
 Value provided cannot be guaranteed in your application due to circumstances beyond our control.

Type No.	Color Tone	Near Infrared transmission
NIR-70N	Black	Transmit from 670nm
NIR-75N	Black	Transmit from 730nm
NIR-80N	Black	Transmit from 760nm
NIR-85N	Black	Transmit from 810nm
NIR-90N	Black	Transmit from 860nm
NIR-911N	Black	Transmit from 910nm


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PHYSICAL PROPERTIES				
PROPERTY	METHOD	UNIT	Normal Grade	Hard Coat Grade
SPECIFIC GRAVITY	ASTM D-792		1.19	1.19
OPTICAL				
Refractive Index	ASTM D-542		1.49	1.49 (1.54)
MECHANICAL				
Elongation	ASTM D-638	%	5	5
Tensile Rupture Strength	ASTM D-638	kg/cm2	750	650
Flexural Rupture Strength	ASTM D-790	kg/cm2	1200	800
THERMAL				
Heat Distortion Temperature	ASTM D-648	°C	110	110
Maximum recommended continuous temperature		°C	80	80
Available with higher temperature ratings on request, 90-95°C				
Coefficient of Thermal Expansion	ASTM D-696	cm/cm/°C	7 x 10 ⁻⁵	7 x 10 ⁻⁵
Specific Heat	ASTM D-638	cal/gr°C	0.3535	0.35
DURABILITY				
Heat Resistance	80°C x 100hr		No Change	No Change
Cold Resistance	-40°C x 100hr		No Change	No Change
Humidity Resistance	60°C x 90% x 100hr		No Change	No Change
Thermal Cycle	-40°C <-> 80°C (10 cycles)		No Change	No Change
ELECTRICAL				
Surface Resistivity		W	>10 ¹⁶	>10 ¹⁶
CHEMICAL				
Methyl Alcohol (50%)			No Change	No Change
Ethyl Alcohol (50%)			No Change	No Change
Soap Aqua Solution			No Change	No Change
Toluene			Dissolved	No Change
Acetone			Dissolved	No Change
Benzene			Swollen	No Change
Ethylene Dichloride			Dissolved	No Change
+				
PENCIL HARDNESS			2H	6~8H
ADHESION	K-5400			100/100
FLAMMABILITY				
	UL standard	>=0.8mm Thickness	94HB	94HB

CONTACT

Should you need any further information,
please do not hesitate to contact us.

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