

KUBE PIR Transmissive Window Films

For front-windows, lens covers and protective hoods of PIR motion detectors, thermal imaging cameras and non-contact thermometers

Features:

- High transmission in the 7 to 14µm central passive infrared (PIR) band
- Excellent visible light absorption available for low false alarm rate / VdS conformity
- Replaces expensive IR windows such as Irtran
- RoHS and TSCA conform
- Suitable for vacuum forming of 3D parts
- Materials exhibit no substantial loss of specification over 10 years



All KUBE PIR transmissive window films are manufactured in Switzerland.

Opaque (natural colour of the material)

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.05	2076	500	88	92	73	N	N	Y	
0.10	2077	500	83	87	61	Y	N	N	SS
0.14	2057	1050	81	92	50	Y	Y	N	
0.22	2058	500	70	84	43.5	YY	Y	Y	SS
0.22	2058a	500	75	84	43	Y	Y	Y	
0.30	2059	500	65	77	28	Y	Y	Y	
0.50	2140	500	62	68	11	Y	N	N	SS
1.00	2062	*	41	62	20	YY	N	N	

* Sheets with dimension 1m x 2m

White

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.09	2023a	760	81	30	0.8	N	Y	Y	
0.11	2023	500 / 35	68	57	4.5	YY	N	Y	SS
0.11	2023d	500	60	46	1.9	YY	N	Y	
0.11	2023e	500	74	62	7.4	YY	N	Y	
0.13	2023b	760	68	54	2.8	YY	Y	N	
0.22	2018	500	56	45	1.6	YY	Y	Y	SS
0.22	2018c	500 / 55	55	43	1.5	Y	Y	Y	
0.22	2018d	500 / 55	59	43	1.5	Y	Y	Y	
0.25	2019	500	50	47	1.8	YY	Y	Y	suitable for vacuum forming
0.27	2025	370	39	35	1.1	YY	Y	Y	suitable for vacuum forming
0.31	2120a	500	51.5	51	2.2	Y	N	N	
0.33	2027a	500	51	44	1.8	YY	Y	Y	suitable for vacuum forming
0.50	2130	500	44	41	1.4	YY	N	N	SS

Super – White

Very high IR transmission due to micro-air-bubble technology instead of pigments

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.10	2111	760	85	28	0.9	Y	N	Y	
0.22	2110	760/670/130	73	22	0.6	Y	N	Y2	SS
0.22	2110a	670 / 130	73	32	1.2	Y	N	Y2	SS textured
0.27	2114	760	49	11	0.2	Y	Y	Y2	paper-like texture & color

Beige / Ivory

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.11	2036	500	64	37	1.5	YY	Y	Y	SS
0.11	2037	500	65	46	2.0	YY	Y	Y	ivory
0.13	2035	1000	69	54	2.9	YY	Y	N	
0.14	2034	500	65	50	2.1	YY	Y	N	

Gray

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.11	2022	500	68	21	2.4	YY	N	Y	
0.22	2020	500	58	12	0.9	YY	Y	Y	SS

Black (also used as white light filter behind fresnel lenses)

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.10	2041	760	72	16	6	Y	Y	Y	SS for white light filtering

Brown

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.11	2038	500	51	5	0.2	Y	Y	Y	SS

Special products (different colours)

Thickness [mm]	Kube Type	Roll width [mm]	IR-Trans [%]	Visible 555nm [%]		UV	Fla	Ad	Remarks
				Stray	Coll				
0.22 white/red	2115	700	69	7	0.1	Y	N	Y	SS visible light blocking layer white front / red rear side
0.05 silver	2056	250	65	2	<0.1				one side semiconductor coated to block visible light

Film samples (sheet size A5)

- individual choice, or
- assorted set, includes film types marked SS (Sample Set) in "Remarks" column

Film orders

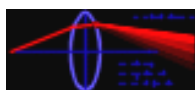
- cut by the meter
- as original roll
- special cuts or punched on request

Price List on www.kube.ch/downloads/pdf/kube_window_films_prices.pdf

Glossary

Thickness	is nominal, typically within $\pm 10\%$, maximum $\pm 15\%$ of the indicated thickness
Roll width	tolerances are +30mm / -0mm
IR-Trans	Infrared transmission in the central 7 to 14 μm (microns) PIR band
Stray	Transmission of visible light at 555nm wavelength, considering reflection losses
Coll	Transmission of a collimated beam of 555nm wavelength, considering reflection and stray light losses. The test arrangement corresponds to a motion detector with 22mm focal length lens. The number indicates the portion of a narrow beam that reaches the sensor
UV	N Not recommended for extended use under daylight conditions Y UV and light protection adequate for indoor use YY Recommended products for outdoor use
Fla	N No special flammability protection Y Flame retardant to IEC 695-2-1
Ad	N No special surface treatment Y Surface treatment to ease adhesion of glue, inside as rolled except where noted Y2 Treated on both sides

Technical information For more details refer to:



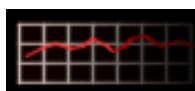
Optical, thermal and mechanical properties

www.kube.ch/downloads/pdf/kube_plastics_properties.pdf



Processing of injection moulding granulates

www.kube.ch/downloads/pdf/kube_granulates_processing.pdf



Long term stability and answers to FAQ

www.kube.ch/downloads/pdf/kube_plastics_quality.pdf



How to fix, glue and weld

www.kube.ch/downloads/pdf/kube_plastics_glue.pdf



Flammability

www.kube.ch/downloads/pdf/kube_plastics_flammability.pdf



Material safety data sheet

www.kube.ch/downloads/pdf/kube_plastics_safety.pdf