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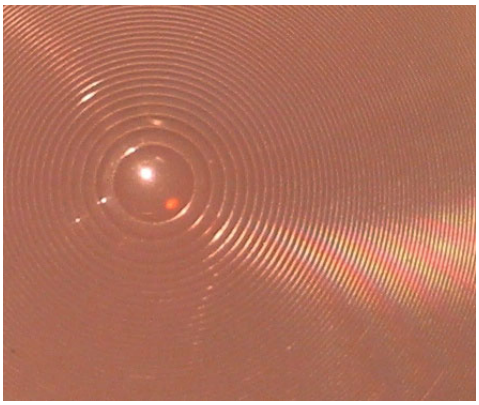
KUBE Electronics AG

KUBE PIR SingleZone Fresnel Lenses

Aspheric lenses, compression molded on thin HDPE sheets. They are designed to focus thermal infrared radiation on a sensor. Also, they can replace expensive germanium lenses in systems requiring moderate imaging quality.



Applications:
- Single zone PIR motion detectors
- Prototyping of fresnel lens arrays
- Thermal imaging cameras
- Non-contact thermometers
- Pyrometers
- Heat sensing industrial controllers
- Automotive road temperature sensing
- Gas analyzers

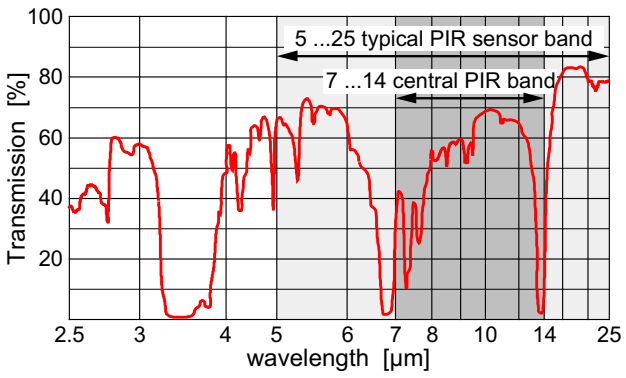
Features:
- Made from KUBE's infrared transmissive HDPE plastic
- Ideal for the 7 to 14 Microns central PIR wavelength band as well as other infrared wavelengths (see graph)
- Can easily be cut to any size or shape

Model-Nr.	Focal Length	Lens Diameter	F - Nr.	Size □	Grooves
TR1002	4.3	10.4	0.41	25.4	gi
TR1003	6.35	12.5	0.5	25.4	gi
TR1004	10.2	22	0.46	30.5	gi
TR1005	13.5	27	0.5	38.1	gi
TR1006	16.5	28	0.59	38.1	gi
TR1007	19.5	33	0.59	44.4	gi
TR1008	23	38	0.61	44.4	gi
TR1009	25	45	0.56	50.8	gi
TR1010	25	25	1.0	38.1	go
TR1011	28.3	50	0.57	58.4	gi
TR907	34	50	0.68	58.4	go

Dimensions in mm
Average lens thickness 0.4 … 0.5mm
F - Number = Focal Length / Diameter
gi = grooves inward (grooves facing the sensor) go = grooves outward

Spectral Transmission

Typical example:
KUBE Fresnel Lens TR1010
0.42mm thick



KUBE large SingleZone PIR Lenses **(available on request)**

focal length f [mm]	diameter $d_{Fresnel}$ [mm]
40	41.2
42.2	41.2
43.5	68.7
44	49.1
46	41.2
47.3	49.1
49	49.1
49.7	49.1

focal length f [mm]	diameter $d_{Fresnel}$ [mm]
50.9	68.7
52.9	41.2
53.5	68.7
54.7	90.4
59.4	58.9
68.5	68.7
120	80