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## **HyplRia**<sup>™</sup> SWIR LENSES - 1.0 to 2.9 µm



The HypIRia are wide-aperture, image-space telecentric lenses precisely crafted to provide clear and bright images in the SWIR spectral range. A broadband anti-reflective coating on carefully selected glass delivers high throughput and low-aberration imaging on an range extending from 1.0 to 2.9 µm.

A translational focus provides excellent stability during focusing. Robustly built, they are well suited for industrial applications or field work.

Three focal lengths are currently available.

OPTICAL CHARACTERISTICS			
	HyplRia 11	HyplRia 15	HyplRia 25
Focal length (mm)	11	15	25
f-number	2.1	2.1	2.6
Image size (diameter, mm)	12.3	12.3	12.3
Spectral range	1 - 2.9 μm	1 - 2.9 μm	1 - 2.9 µm
Optical output (image space)	Telecentric ± 2.9°	Telecentric ± 1.1°	Telecentric ± 0.1°
RMS spot radius (μm) **	11.2	10.4	8.8
Maximum working distance	Infinity	Infinity	Infinity
Minimum working distance (mm)	300	300	300
Full diagonal angle view	60.4°	44.6°	27.6°
Horizontal angle of view (9.6 mm sensor)	47.2°	34.8°	21.7°
Vertical angle of view (7.68 mm sensor)	37.8°	27.8°	17.5°
Full diagonal FOV at 1 m distance (mm)	1164	820	491
MTF-50 on the sensor (Ip/mm)	19	21	25
Distortion	< 5%	< 3%	< 3%
MECHANICAL CHARACTERISTICS			
Dimensions (mm)	56 x 56 x 91	55 x 48 x70	55 x 48 x 60
Mount	C-Mount	C-Mount	C-Mount
Weight (kg)	0.8	0.5	0.4
Front filter thread	M45 x 0.5	1.035-40 UNS-2A	1.035-40 UNS-2A
**Average over the whole image and all wavelengths	100 80 100 100 100 100 100 100 1	100 90 80 70 60 50 0.9 1.1 1.3 1.5 1.7 1.9 2.1 2.3 2.5 2.7 2.9 WAVELENGTH (nm)	100 90 80 70 0.9 1.1 1.3 1.5 1.7 1.9 2.1 2.3 2.5 2 WAVELENGTH (nm) –

