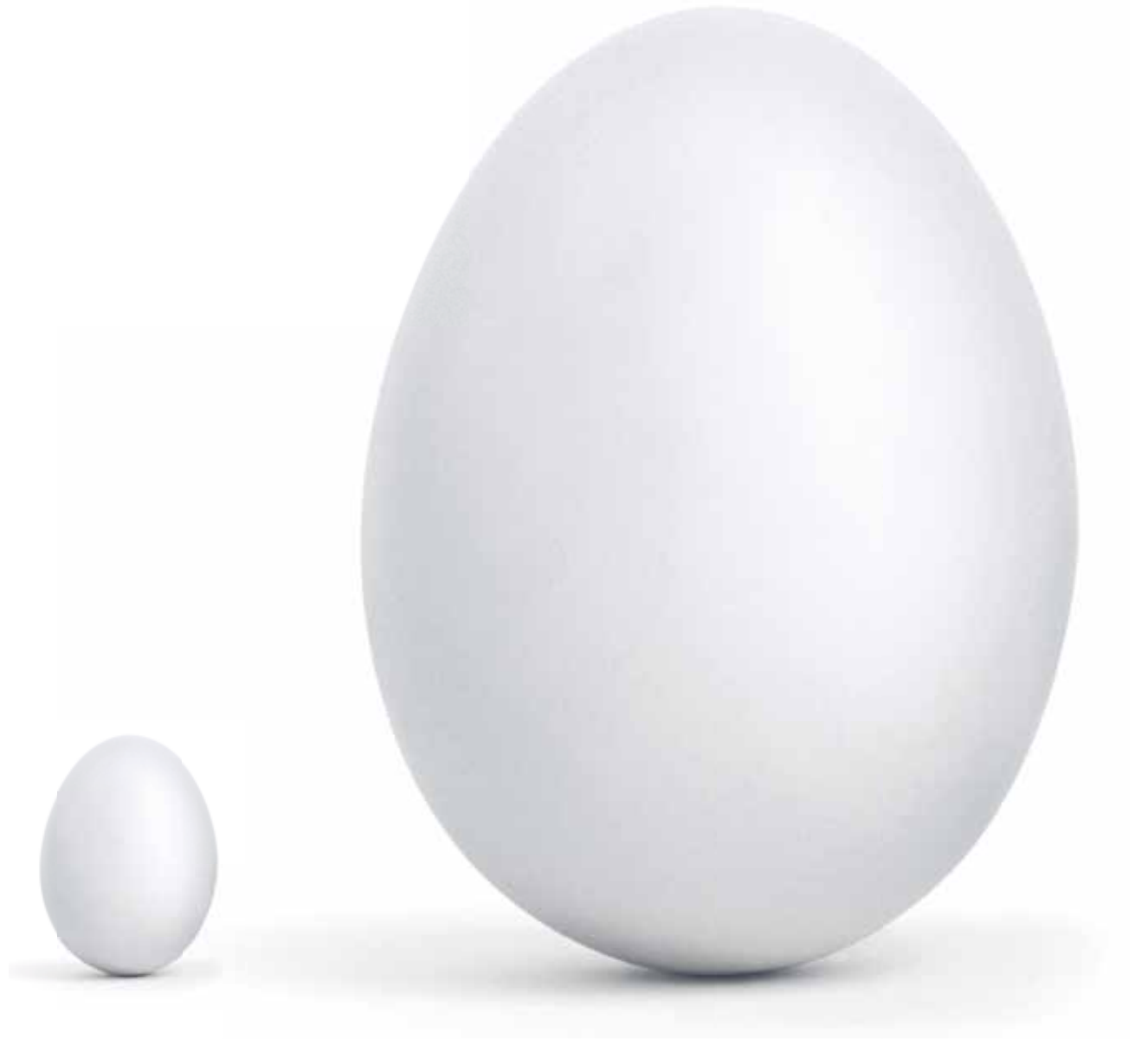




EGGSACTLY WHAT YOU NEED!
THE NEW MACRO VARON™ LENS
FOR PERFECT AND VARIABLE
QUALITY MANAGEMENT.



VARIABLE FROM

0.5 X

TO

2.0 X

EGGSACTLY!

THE MACRO VARON™ LENS: ADVANCED CAS (CONTINUOUS ABERRATION SUPPRESSION) TECHNOLOGY

- Designed for high resolution line scan applications up to 12 k with 5 micron pixels
- Provides ultra-high optical resolution to 2.5 microns per pixel
- High magnification range using a single lens from 0.5X to 2.0X
- Maintains diffraction-limited performance over the entire magnification range
- Complete elimination of inherent vignetting effects yields to homogeneous intensity over the entire field
- Distortion-free design for high-accuracy measurements
- Ensures strict chromatic correction for longitudinal and lateral color



The line scan image capture method is efficient and useful for many web and other surface inspection applications. Specifically, FPD and PCB inspection systems require high resolution line scan technology to achieve the high throughput and cost-efficient defect detection demanded by quality assurance processes in manufacturing. In the case of high resolution cameras, it is often the lens which is the limiting factor that determines the overall system performance.

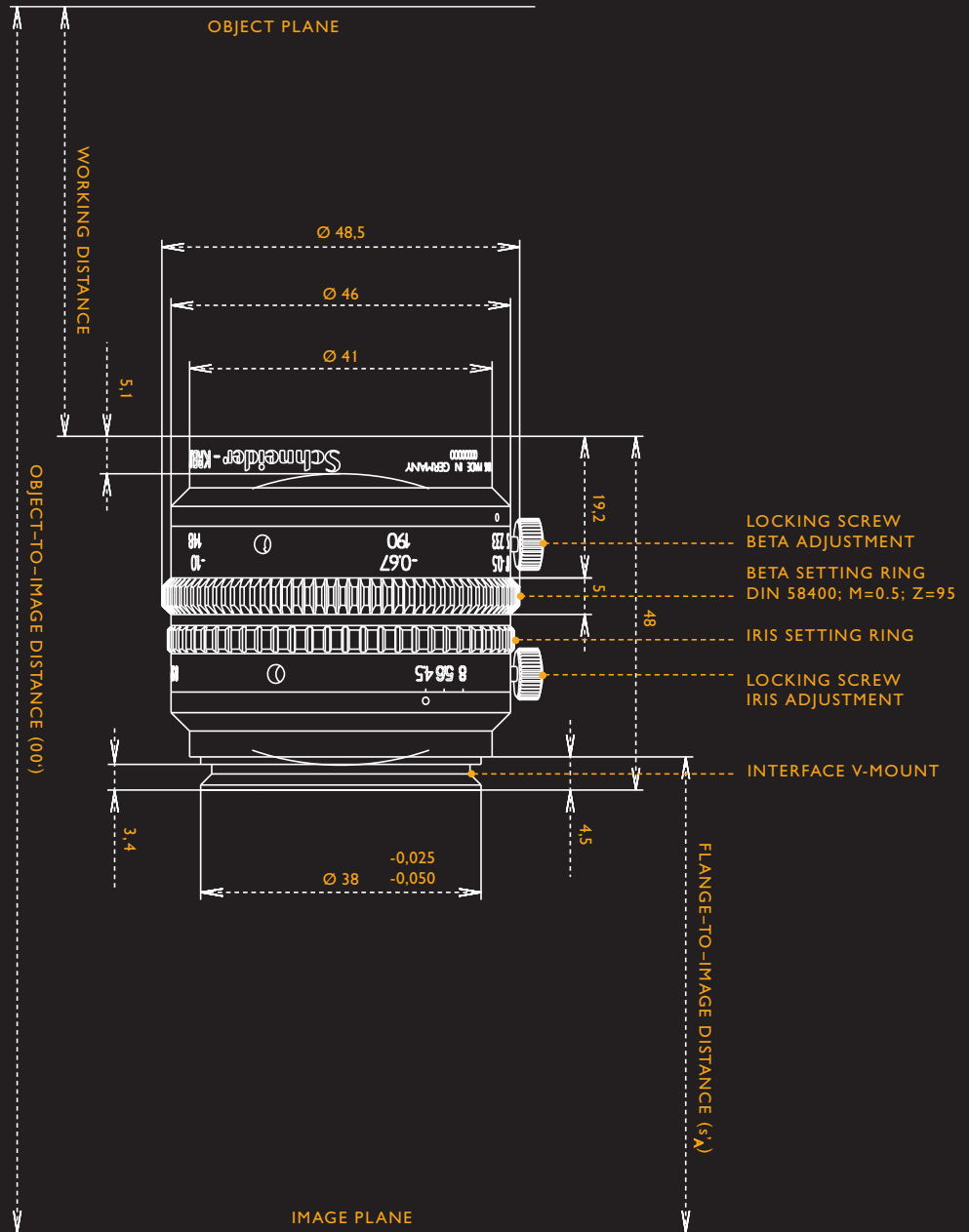
The MACRO VARON™ lens has been designed to improve the resolution and flexibility of advanced inspection systems using high resolution 12k line scan cameras. The design has been optimized to deliver an optical magnification range of between 0.5X to 2.0X. Innovative CAS – Continuous Aberration Suppression –

lens technology produces uniform high performance over the entire magnification range.

A gear set moves floating elements inside the lens to correct aberrations and ensures the appropriate adjustment for the desired magnification setting. A special design ensures a constant focal length at any magnification. The gear arrangement enables the magnification adjustment to be externally motorized in an automated environment.

The MACRO VARON™ lens is designed for industrial machine vision applications and improves the overall system performance of high resolution inspection processes. A lockable iris adjustment mechanism ensures system stability, even in the presence of vibration.

LENS DATA (PRELIMINARY)

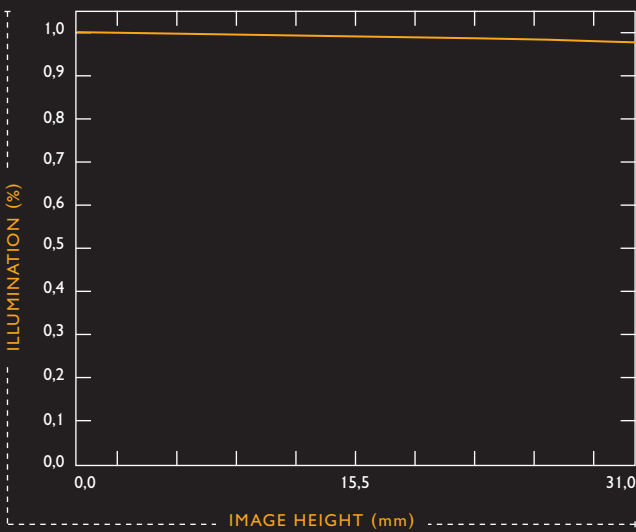


LENS DATA (PRELIMINARY)

LENS	FOCAL LENGTH	MAX APERTURE	SENSOR PIXEL SIZE NOMINAL	IMAGE CIRCLE	MAGNIFICATION RANGE	MOUNT TYPE V-MOUNT	FILTER THREAD	WEIGHT	CODE NO.
MRV 4.5/85 - 0001 CAS 0.5X - 2.0	85 mm	F 4.5	5 μ m	62 mm	0.5X - 2.0X	V-mount	M 37.0 x 0.75	200 g	1009001

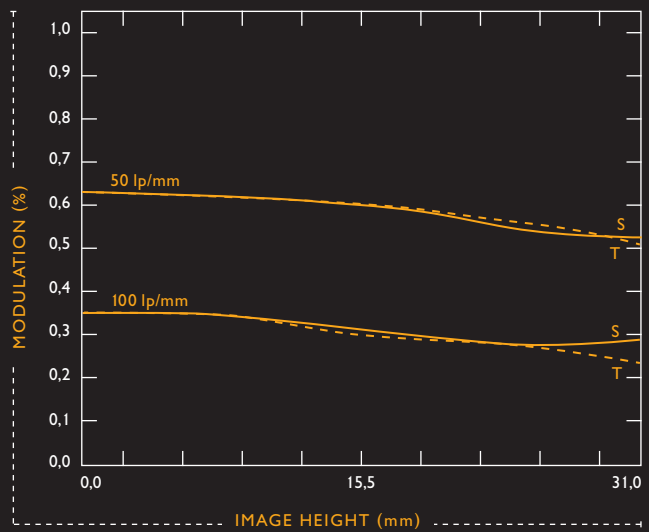
LENS	MAGNIFICATION	DISTORTION	WORKING DISTANCE	OBJECT-TO-IMAGE DISTANCE (00')	FLANGE-TO-IMAGE DISTANCE (s' _A)
MRV 4.5/85 - 0001 CAS 0.5X - 2.0X	0.5X	< 0.2 %	228 mm	378 mm	106 mm
	0.67X	< 0.1 %	186 mm	350 mm	121 mm
	1.0X	0 %	143 mm	335 mm	149 mm
	1.5X	< 0.1 %	114 mm	349 mm	192 mm
	2.0X	< 0.1 %	100 mm	378 mm	237 mm

RELATIVE ILLUMINATION



Relative illumination over the image height.

MODULATION TRANSFER FUNCTION



The MTF shows the contrast over the image height at 1X magnification.

Jos. Schneider Optische Werke GmbH
Ringstraße 132
55543 Bad Kreuznach
Germany
Tel.: +49 (0)671/601 -205/ -491
Fax: +49 (0)671/601 -286
www.schneiderkreuznach.com/industrialoptics
industrial@schneiderkreuznach.com

Schneider Optics, Inc.
285 Oser Avenue
Hauppauge, NY 11788
USA
Phone: +1 631.761.5000
Fax: +1 631.761.5090
www.schneideroptics.com/industrial
industrial@schneideroptics.com

Jos. Schneider Optische Werke GmbH is
certified ISO 9001.

We accept no responsibility for any errors
and reserve the right of modification without
further notice. 10.2007

© Jos. Schneider Optische Werke GmbH