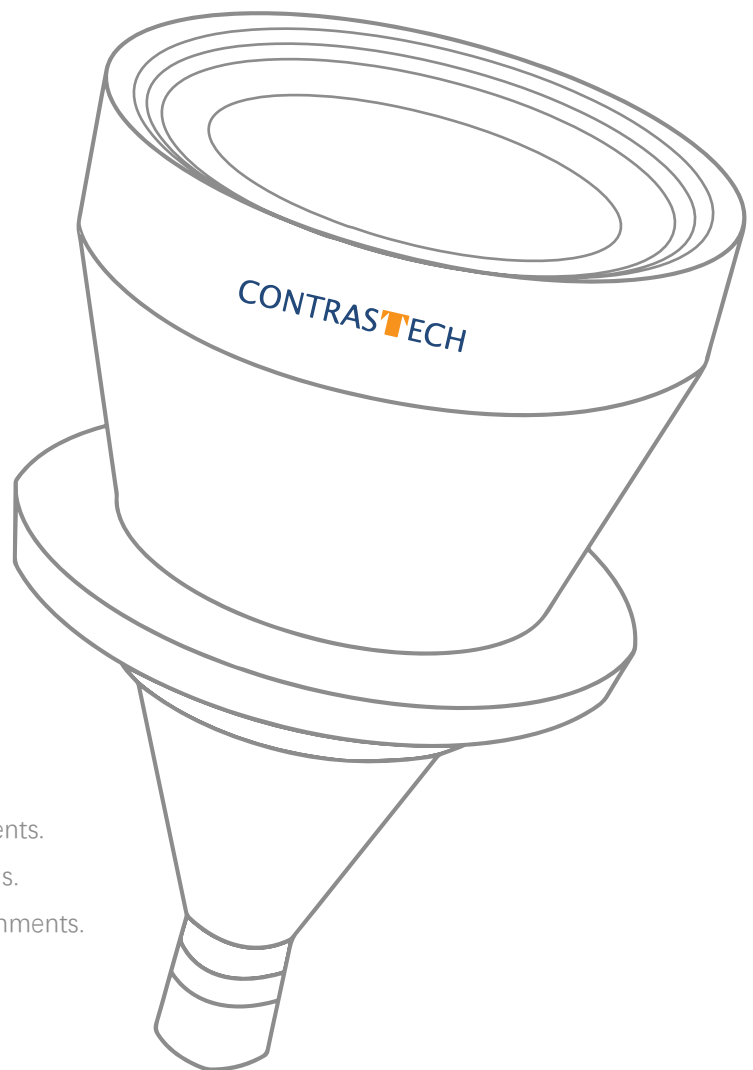


# SWIR SERIES

---



## MAIN FEATURES

- ◆ **High telecentricity** for thick object imaging.
- ◆ **Nearly zero distortion** for accurate measurements.
- ◆ **Excellent resolution** for high resolution cameras.
- ◆ **Simple and robust design** for industrial environments.

# ABOUT US

---

Hangzhou Contrastech Co., Ltd. is a leading imaging technology company with 20+ years of expertise in machine vision, optical imaging, and intelligent data processing.

Our flagship telecentric lenses, together with 360° telecentric lenses and telecentric light sources, deliver distortion-free imaging and precise measurement, with stable illumination for advanced automation and inspection.

Beyond standard products, we provide customized optical solutions—including infrared, ultraviolet, and multispectral designs—to tackle the most demanding applications.

Today, Contrastech telecentric technology powers leading-edge AI vision systems worldwide, enabling high-precision inspection, intelligent recognition, and reliable data acquisition. By combining world-class performance with optimized cost control, we help customers cut costs by 30–50% while achieving top-tier performance and efficiency.

# VISIBLE~SWLR SERIES

NEW

SWIR

## PRODUCT FEATURES

Visible~SWIR Telecentric Lens with Focus Shift Correction

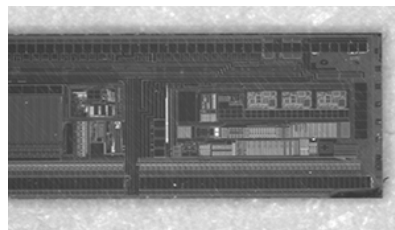
1. Focus shift correction in wide wavelength band from Visible to SWIR
2. Clear images in visible light and transmitted images in SWIR can be captured without focus adjustment
3. Possible to capture differences and defects that cannot be seen in visible ray



Model		Magnification	WD	Image Circle	Wavelength
Coaxial	Non Coaxial				
TLVS-0.7XD-H1.1	TLVS-0.7X-H1.1	0.7x	110mm	Φ20.5	400-1200nm
TLVS-1.0XD-H1.1	TLVS-1.0X-H1.1	1.0x		Φ24	
TLVS-2.0XD-H1.1	TLVS-2.0X-H1.1	2.0x			
TLVS-4.0XD-H1.1	TLVS-4.0X-H1.1	4.0x		Φ20.5	

## Example of SWIR Transparent Images

Possible to image the internal circuitry of IC by transmitting light through silicon at wavelength 1100 nm



Visible (White)



SWIR (1100nm)

# SWIR SERIES

NEW

## PRODUCT FEATURES

1. Available for SONY IMX990, 1.3MP SWIR image sensor
2. Available for SWIR image sensor 1", InGaAs Sensor
3. Special design to transmit SWIR 950nm-1800nm
4. Possible to capture differences and defects that cannot be seen in visible ray
5. 1.0x/2.0x lenses are adjustable iris, possible to adjust depth of field
6. No coaxial type, TLSW-1.0X-H1.1 and TLSW-2.0X-H1.1 are available



Model No.	Optical Specs									Mechanical Specs	
	Coaxial	Mag. (x)	WD (mm)	Max. Sensor Size (Φmm)	F/#	Object side NA	DOF (mm)	Distortion (% max)	Resolution (μm)	Length (mm)	Mount
TLSW-0.5XD-H1.1	Yes	0.5	116.4	1.1"	6.3	0.040	2.02	0.02	18.4	259.3	C Mount
TLSW-0.7XD-H1.1	Yes	0.7	116.0	1.1"	6.4	0.055	1.05	0.02	13.4	255.6	C Mount
TLSW-1.0XD-H1.1	Yes	1.0	110.0	1.1"	7.0	0.071	0.56	0.02	10.3	259.9	C Mount
TLSW-1.0X-H1.1	No	1.0	110.0	1.1"	7.0	0.071	0.56	0.02	10.3	259.9	C Mount
TLSW-2.0XD-H1.1	Yes	2.0	110.2	1.1"	11.5	0.087	0.23	0.03	8.4	280.1	C Mount
TLSW-2.0X-H1.1	No	2.0	110.2	1.1"	11.5	0.087	0.23	0.03	8.4	280.1	C Mount
TLSW-4.0XD-H1.1	Yes	4.0	110.3	1.1"	20.0	0.100	0.10	0.02	7.3	290.5	C Mount

# CONTRASTTECH

Machine Vision Expert



**1 Million**  
FPS Camera

Imaging Solutions  
OEM/ODM



**Infrared Camera**

**0.3-14μm**

NIR/SWIR/MWIR/LWIR



**Kepler Pro**

**Software**

No Need  
Programming



CONTRASTTECH

Hangzhou Contrastech Technology Co., Ltd.  
No. 8 Xiyuan 9th Road, West Lake District  
Hangzhou Zhejiang 310030 China  
Tel: 86-571-86888309  
[www.contrasttech.com](http://www.contrasttech.com)

