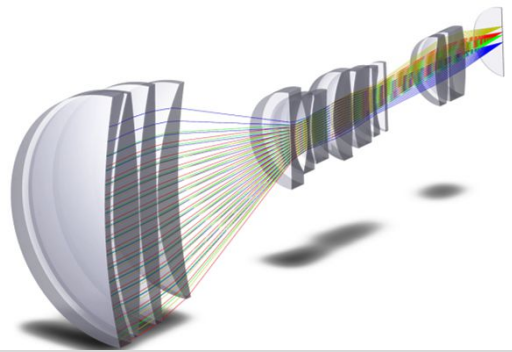


# JCOP c4c

optical design  
&  
manufacturing



- Design, manufacturing and assembly of optical components and systems
- Laser Direct Imaging, telecentric lenses, standard objectives

examples of our own design for specific customer requirements

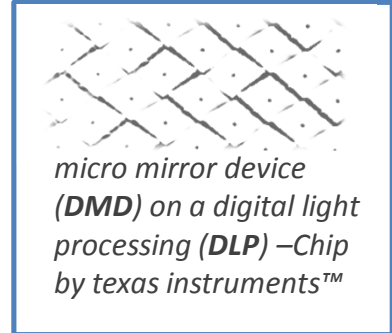
# LDI

## Laser Direct Imaging

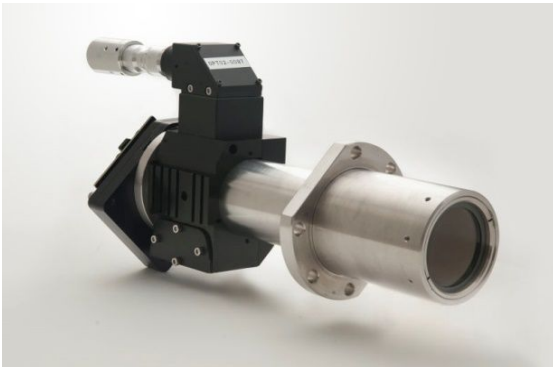
Customized LDI objective lens with DLP engine for LED or laser illumination

Fields of application:

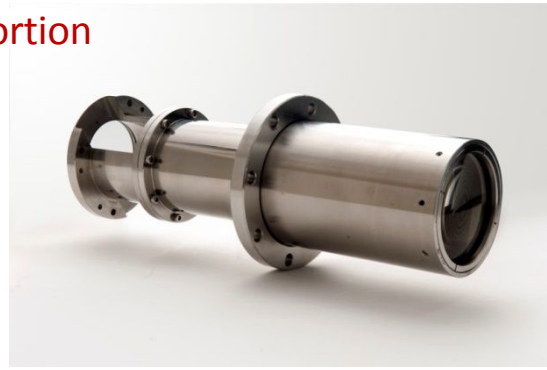
- pattern projection for 3D measurement
- PCB and FPD patterning and inspection
- labeling
- microstructuring
- 3D printer



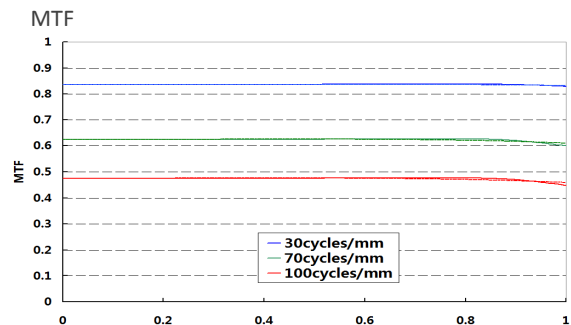
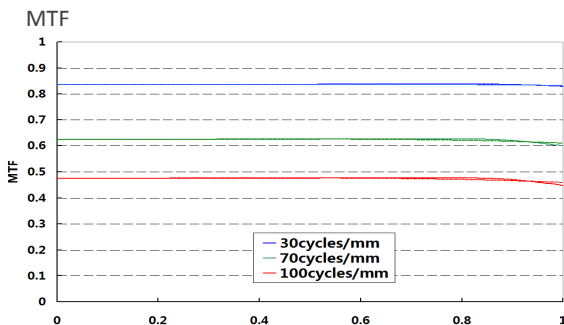
high resolution  
low distortion



LDI720	
DMD	0.7 inch (1024 x 804)
Wavelength	405 nm
Magnification	2 x
NA (image side)	0.05
Distortion	2 micron
Telecentric	Double Side
TIR	No



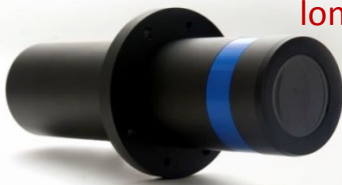
LDI919	
DMD	0.95 inch (1920 x 1080)
Wavelength	405 nm
Magnification	1.9 x
NA (image side)	0.05
Distortion	2 micron
Telecentric	Double Side
TIR	No



examples of our own design for specific customer requirements

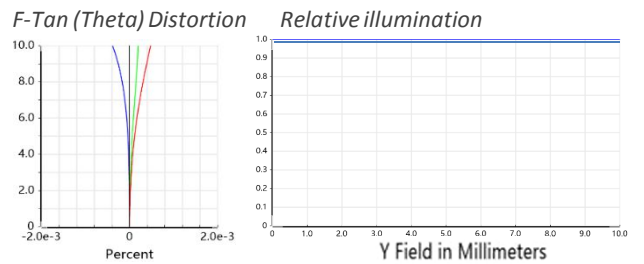
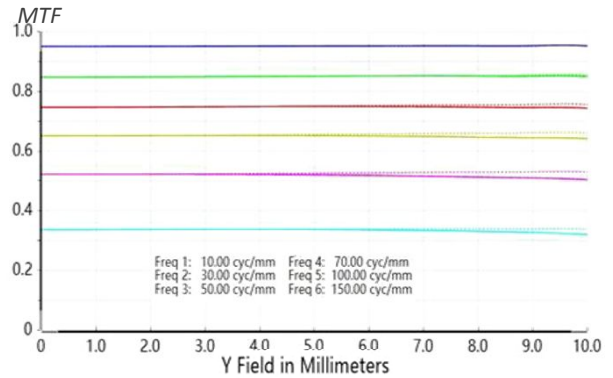
# telecentric

constant illumination  
low distortion  
long working distance



**DTL1108**

Image circle	∅ 20mm
Wave length	400 nm – 700 nm
Magnification	-1.0 x
NA (image side)	0.08
Working distance	150 mm
Interface	C-mount



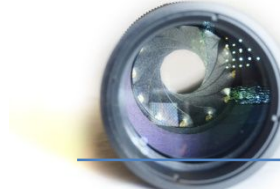
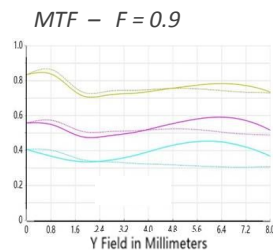
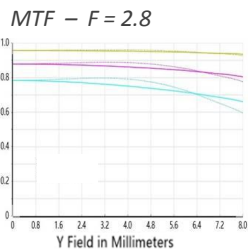
# entocentric



wide aperture

**DG8150**

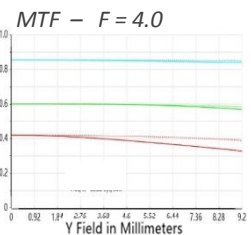
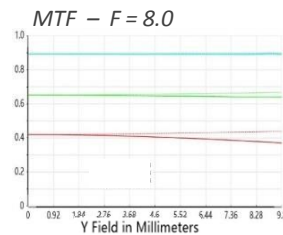
Image circle	∅ 16 mm
Wave length	400 nm – 700nm
Focal length	50 mm
F number	0.9 – 16
Interface	C-mount



floating lens  
long working distance  
configurable magnification

**DG6190 (floating lens)**

Image circle	∅ 18.4 mm
Wave length	400 nm – 700 nm
Focal length	90 mm
F number	4 – 16
Magnification	0.1 x – 0.5 x
Interface	C-mount



# JCOP

## Shanghai Jiaguang Optics Group (JCOP)

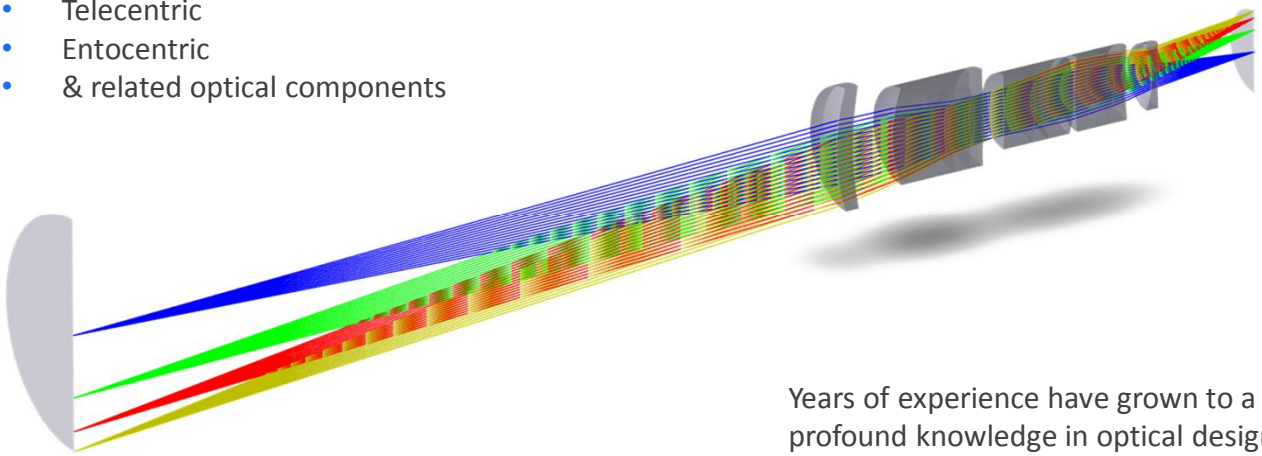
is an expert in design and manufacturing of tailored objective lens systems and components.

- Founded in 1988
- Design and production of objective lens systems
- Lens and prism production
- Coating workshop
- OEM and ODM assembly
- 2000 m<sup>2</sup> workshop, 300 m<sup>2</sup> clean room
- More than 30 engineers
- CNC grinding and polishing machines from SCHNEIDER™
- Opticentric 3D and Imagemaster HR, VIS, NIR from TRIOPTICS™
- Design on ZEMAX™ work stations



## Lens systems for all common mounting systems

- LDI
- Telecentric
- Entocentric
- & related optical components



Years of experience have grown to a profound knowledge in optical design and production.

- Optical OEM design
- Manufacturing of optical components
- Assembly of objective lens systems

The combination of design and manufacturing results in high quality, reliable products with short delivery time.

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