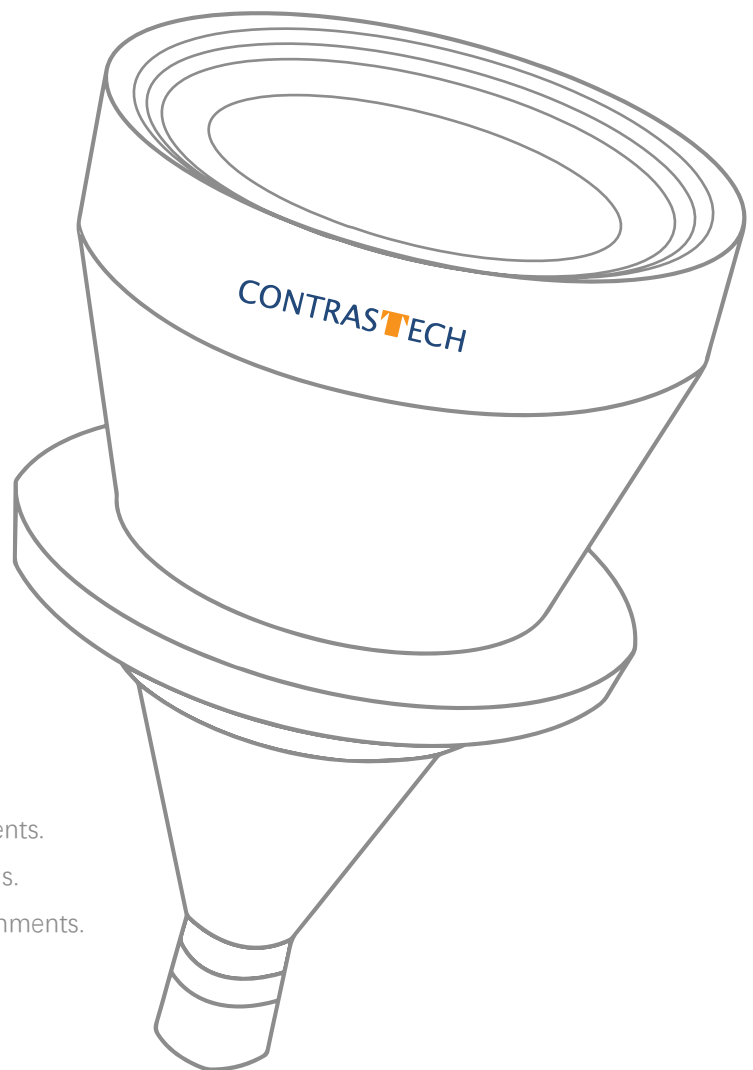


TELECENTRIC ILLUMINATION TI SERIES



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.

Telecentric Illumination

TI Series

Features

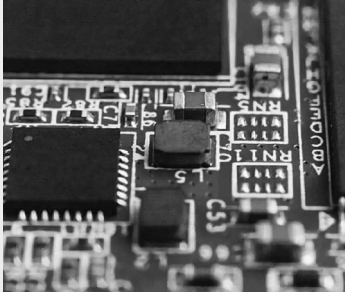
- Complete light coupling, Increased distance between object and illumination source;
- Border effects removal, offer higher edge contrast and higher measurement accuracy;
- Field depth and telecentricity improvement.

Applications

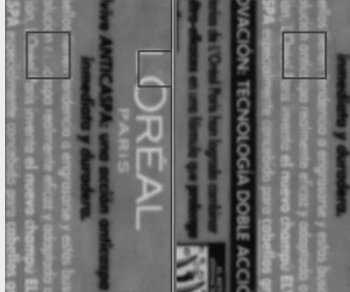
- Inspection of LCD, TP screen, LTO circuit, PCB circuit;
- Appearance inspection of food or medicine.



Examples of Telecentric Light Images



PBC detection



Printing defect detection

Common Specifications

| | |
|----------------------|---|
| Output beam diameter | 20-200mm |
| LED power rating | 1W/3W (Standard 1W) |
| Color | Red 630nm: 3.5V / 350mA Blue 460nm: 3.5V / 350mA Green 520nm: 3.5V / 350mA White 430~680nm: 3.5V/350mA |

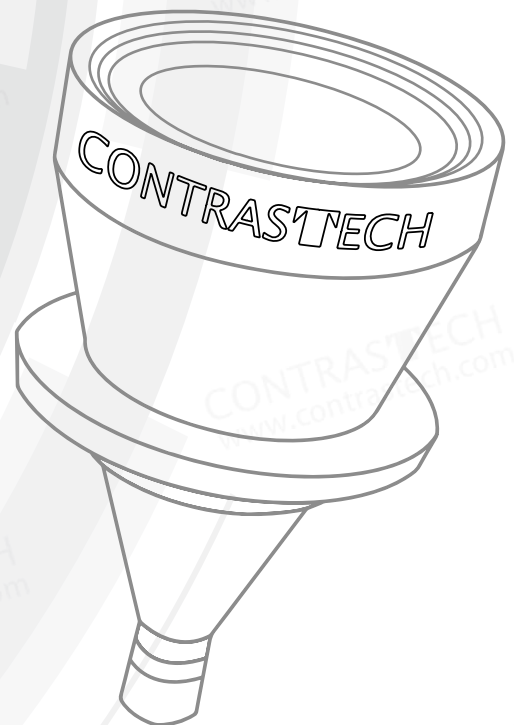
Explanation of Model Code

| | |
|--------|--------------|
| VT-TI | 20 |
| Series | Illum. Diam. |

| Model No. | EFL (mm) | Power cons. (W) | Supply Voltage (v) | Max Current (mA) | Effective Illum. Dia. (mm) | Recommend WD (mm) | WD Variation Range (±mm) | Recommended Collimation (°) | Recommended Parallelism (°) |
|-------------|----------|-----------------|---|------------------|----------------------------|-------------------|--------------------------|-----------------------------|-----------------------------|
| VT-TI-20 | 100.000 | 3 | 3 | 1000 | 20 | 110 | 50 | 0.52 | 0.060 |
| VT-TI-37 | 79.300 | 5 | 24 | 208 | 37 | 56 | 40 | 1.73 | 3.480 |
| VT-TI-50 | - | 3 | 3 | 1000 | 50 | 110 | 34 | 0.29 | 0.048 |
| VT-TI-60 | 131.400 | 5 | 24 | 208 | 60 | 90 | 66 | 1.05 | 2.556 |
| VT-TI-70 | - | 3 | 3 | 1000 | 70 | 150 | 77 | 0.33 | 0.060 |
| VT-TI-80 | 160.300 | 5 | 24 | 208 | 80 | 120 | 80 | 0.86 | 1.800 |
| VT-TI-80-L | 160.300 | 5 | 24 | 208 | 80 | 120 | 80 | 0.86 | 1.800 |
| VT-TI-100-L | 220.700 | 5 | 24 | 208 | 100 | 165 | 110 | 0.62 | 1.740 |
| VT-TI-120 | - | 3 | 3 | 1000 | 120 | 250 | 47 | 0.55 | 0.048 |
| VT-TI-152-L | 418.992 | 5 | 24 | 208 | 152 | 419 | 209 | 0.33 | 0.144 |
| VT-TI-195-L | 508.382 | 5 | 24 | 208 | 195 | 508 | 254 | 0.27 | 0.173 |
| VT-TI-238-L | 753.723 | 5 | 24 | 208 | 238 | 751 | 377 | 0.18 | 0.079 |
| VT-TI-300 | - | 1W / 3W | 5V(External Controller)/ 12V(Direct Current) | 700 | 300 | 155-310 | 155-310 | 0.11 | 0.09 |

Dimension (mm)

TELECENTRIC ILLUMINATION TI DIAGRAM



CONTRASTTECH

Machine Vision Expert



1 Million
FPS Camera

Imaging Solutions
OEM/ODM



Infrared Camera

0.3-14 μ m

NIR/SWIR/MWIR/LWIR



Kepler Pro

Software

No Need
Programming



CONTRASTTECH

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