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Technical Note

Expanding the Field: Introducing the Optem 10X M Plan Apo Wide Field Objective

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Superior Image Quality across a Wider Field of View

The enhanced Optem® 10X M Plan Apo wide field objective culminates meticulous engineering with customer inspiration, delivering where performance matters most: high resolution, uniform image quality across a wider field of view. Explore how this enhanced objective increases your inspection confidence and maximizes your production throughput.

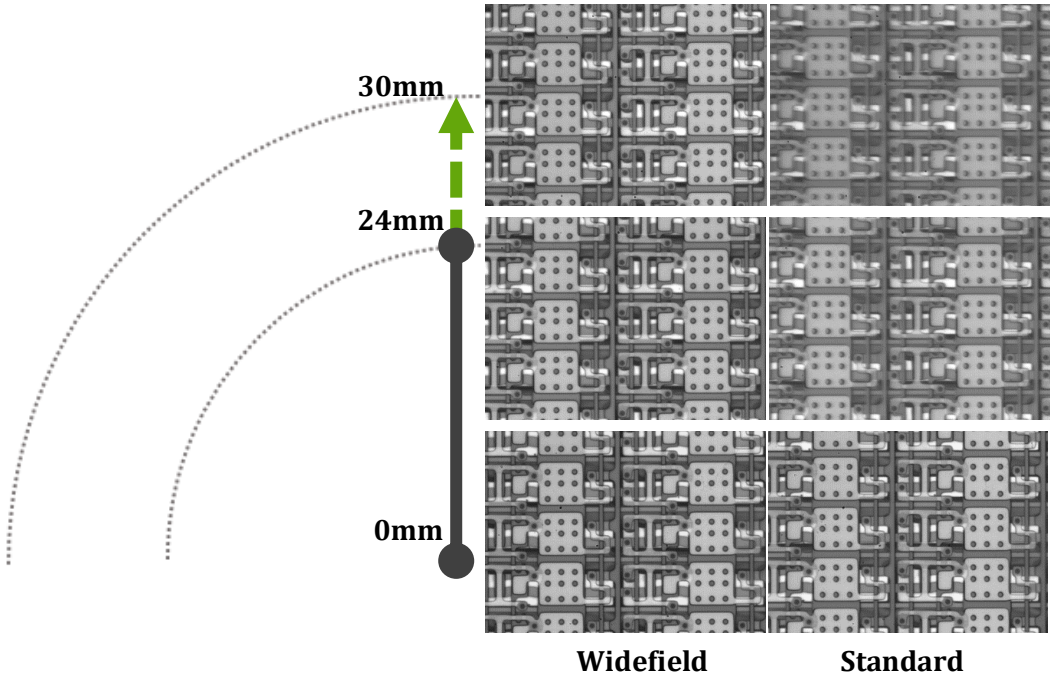
Technical Snapshot

Feature	Specification
Magnification	10X
Numerical Aperture	0.28
Resolving Power	1um
Working Distance	34mm
Supported Sensor Size	ϕ30mm
Field of View	3.0mm
Parfocal Length	95mm
Mounting Thread	M26 x 36 TPI

Benefits

Wider usable field of view: Supports a full 30 mm image circle, capturing **~56% more area** than objectives designed for 24 mm sensors. Fewer frames per sample and faster data capture. More sample area in a single shot significantly speeds up inspection workflows.

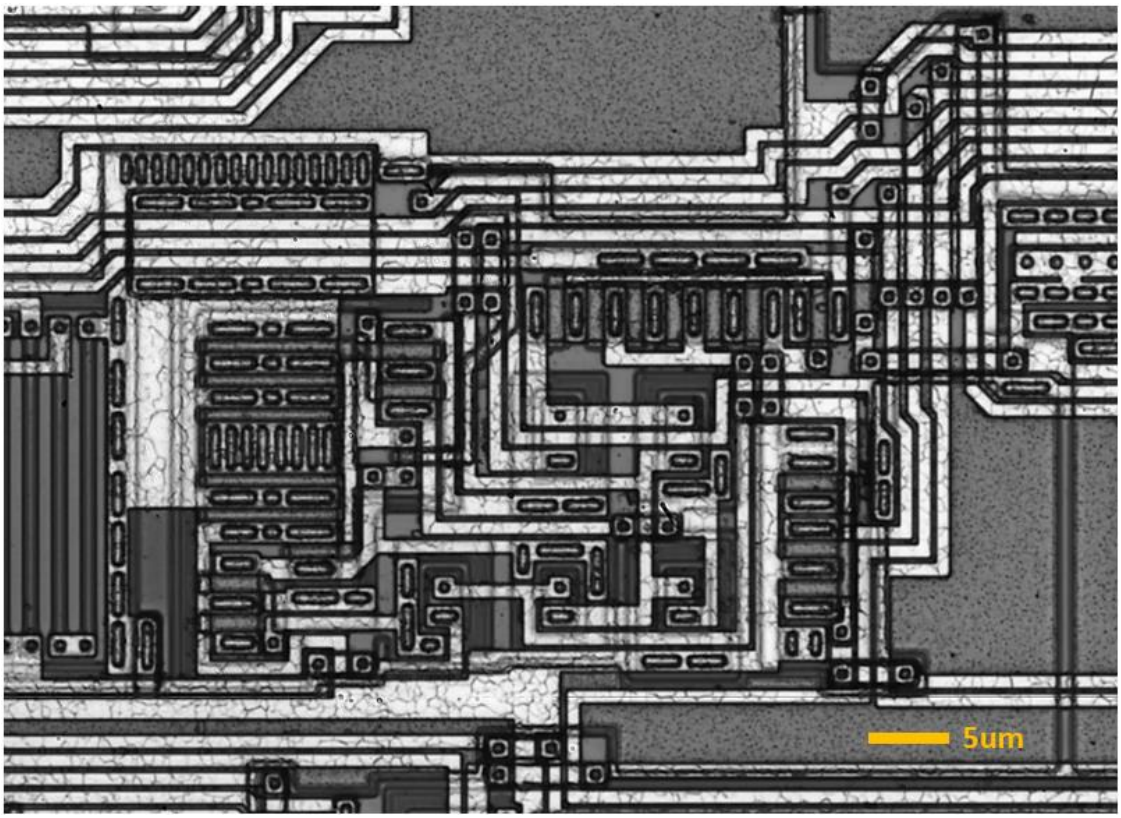
Minimized edge degradation: Optimized flat-field design delivers superior uniform resolution and contrast from center to edge, avoiding typical corner softening seen with 24 mm optimized objectives. This allows for seamless stitching without quality compromises at the tile boundaries, critical in semiconductor and electronics inspection applications.



Confidence in product quality: With consistent performance across the field, fewer images are flagged, discarded or re-scanned, boosting overall confidence in the underlying data and ultimately the quality of your product.

High-resolution imaging: Detects micron scale features at a comfortable 34 mm working distance, meeting the needs of current and future applications.

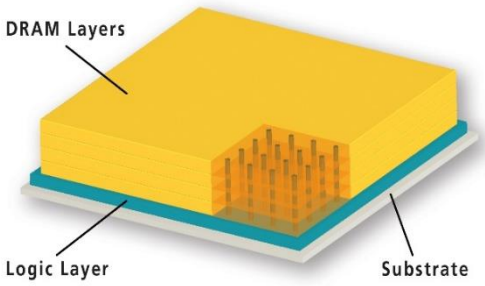
Full utilization of modern sensors: Optimized to support modern sensors without vignetting—even at the corners—making full use of the latest sensor technology.



Applications

Advanced package & 3D integrated circuit (IC) inspection and analysis
Inspecting 2.5D/3D integrated circuits with through-silicon vias (TSVs) and through-glass vias (TGVs), micro bumps, or hybrid bonding benefits from large fields to capture interconnected features.

Photonic integrated circuits and micro-optical assembly
IC coupling and edge detection as well as micro-optical assembly verification and bond inspection benefit from uniform wide fields of view.



High Bandwidth Memory employing 3D Stacking with Interconnected Layers

About Excelitas

Excelitas is the leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor and avionics end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of photonic technologies, offering leading-edge innovation in sensing, detection, imaging, optics and specialty illumination for customers worldwide.