

NANOGUIDE™

Enabling the vision of tomorrow through ultra-high resolution imaging.

Incom's Nanoguide™ faceplates are the highest resolving image guide ever produced. They transfer images without pixelation from the input surface to the output surface with high uniformity, true color fidelity, and minimal distortion.

Nanoguide allows the highest resolving applications to utilize a low-weight polymer-based imaging optic. Its nanostructure is based upon waveguiding principles, but does not utilize total internal reflection as in fiber optics. Although the image-transfer function is the same, Nanoguide is capable of much higher resolutions creating new possibilities for applications previously imagined but now realized.

FEATURES

- Extremely high resolution
- Lightweight and durable
- Made-to-order geometries, including curves
- Scintillating versions
- Available in fused flexible fiber and fused rigid plates
- Available with magnification

APPLICATIONS

- Augmented reality
- Virtual reality
- Light field technology
- Holographic displays
- Ultra-high resolution imaging detectors
- Endoscopy
- Neutron Detection
- Scintillators
- Field flatteners

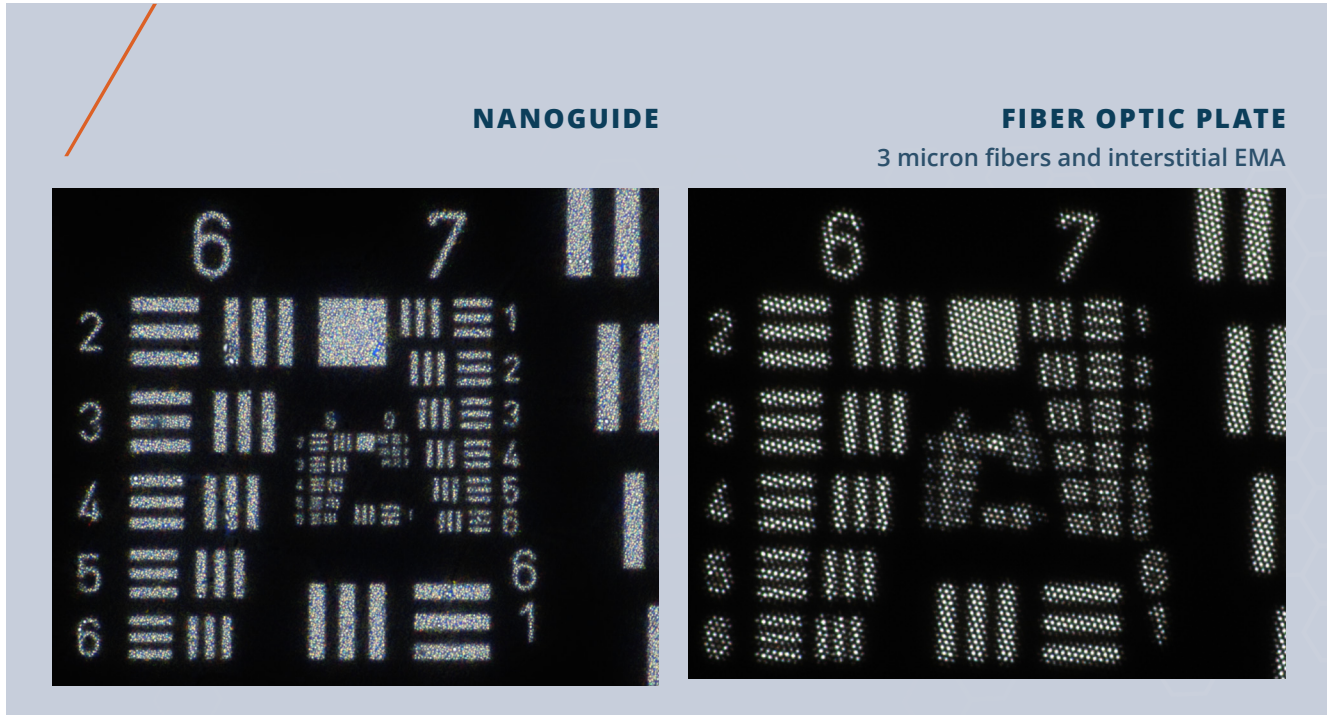
SPECIFICATIONS

REPRESENTATIVE VALUES SHOWN

Index of Refraction	1.64
Numerical Aperture	0.85
CTE (Coefficient of Thermal Expansion) (x10 ⁻⁷ /C)	790
Density (g/cm ³)	1.20

RESOLUTION COMPARISON

USING INDUSTRY STANDARD 1951 USAF RESOLUTION TARGET



RESOLUTION CONVERSION CHART

NUMBER OF LINE PAIRS/MM IN 1951 USAF RESOLUTION TARGET

Element	Group Number		
	7	8	9
1	128	256	512
2	144	287	575
3	161	323	645
4	181	362	—
5	203	406	—
6	228	456	—