



NOTHING COMPARES TO  
**PHLOX<sup>®</sup> BACKLIGHTS**

# MAJOR ADVANTAGES:

- LESS STRAY LIGHT & BETTER CONTRASTS
- LESS THICK
- IP65, RATED, SCRATCH RESISTANT
- EXTREME UNIFORMITY
- ALL COLOURS AVAILABLE,  
SOLVE ANY APPLICATION WITH THE RIGHT WAVELENGTH
- CUSTOM SIZES WITH FAST DELIVERY

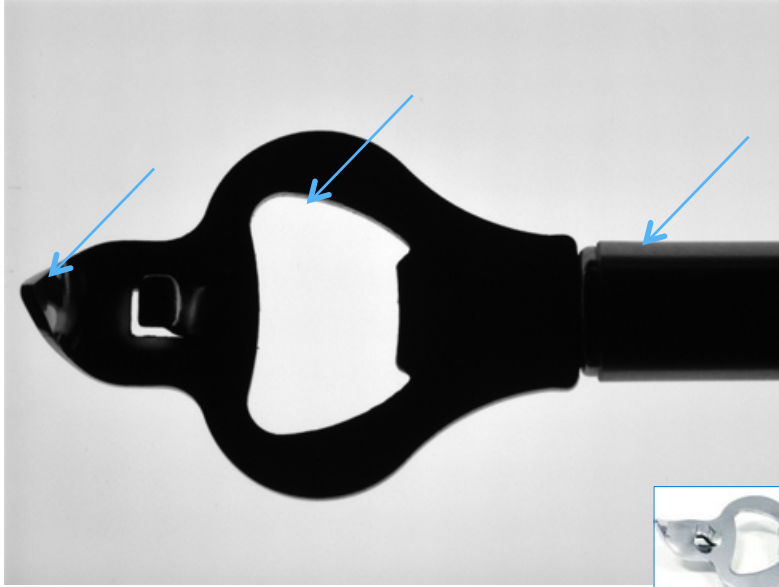


NASA already uses PHLOX® technology

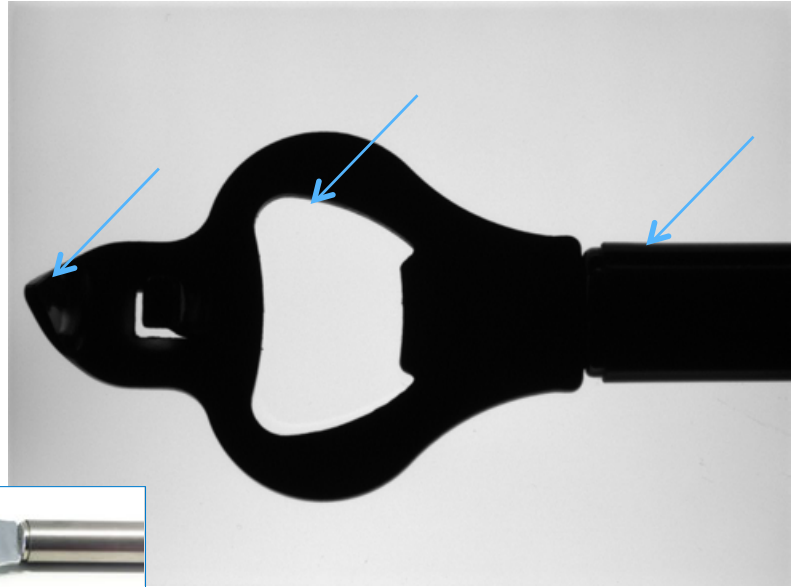


# LESS STRAY LIGHT & BETTER CONTRASTS

Conventional backlight



PHLOX backlight



PHLOX backlights are more directed. Higher edge contrasts are created with shiny surfaces. This will cause more reliable applications and better measurement results.

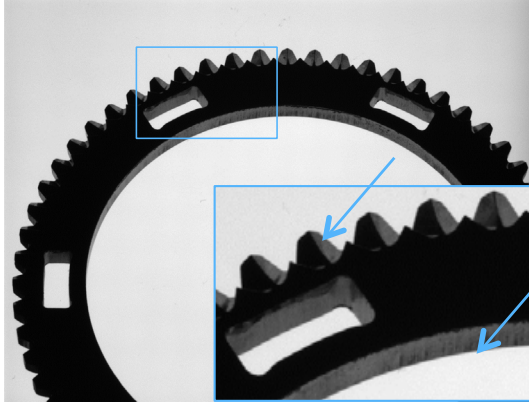




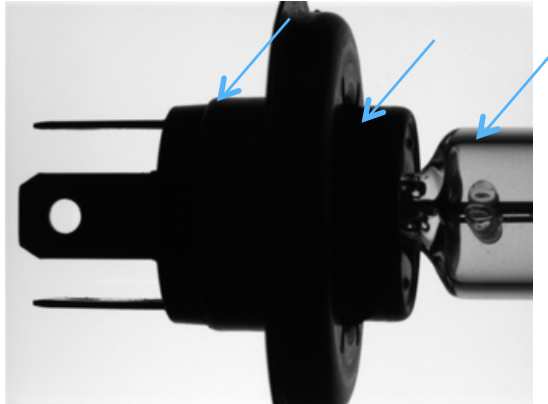
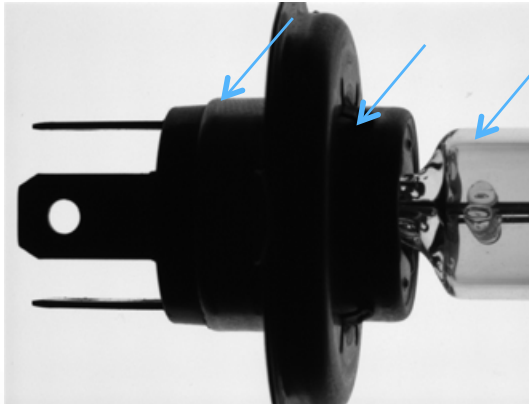
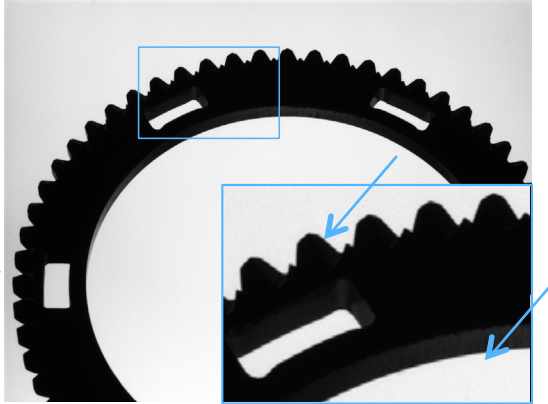
ADVANTAGE

# LESS STRAY LIGHT & BETTER CONTRASTS

Conventional backlight

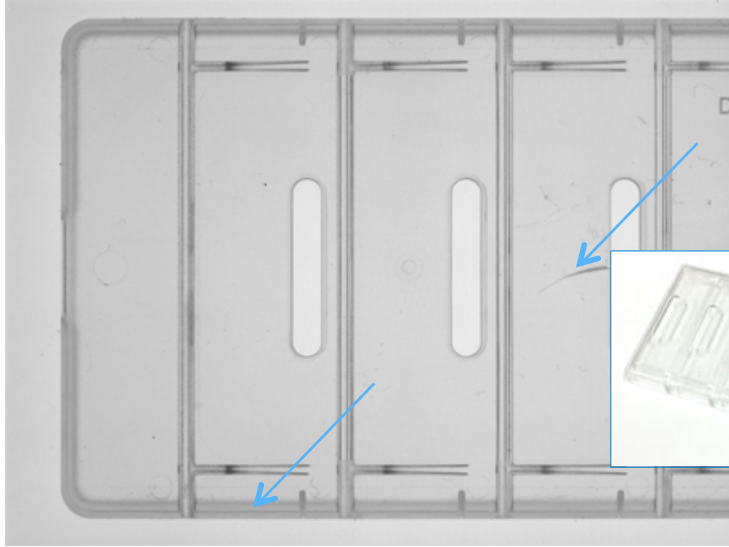


PHLOX backlight



# LESS STRAY LIGHT & BETTER CONTRASTS

Conventional backlight



PHLOX backlight



PHLOX backlights emit more directed light.

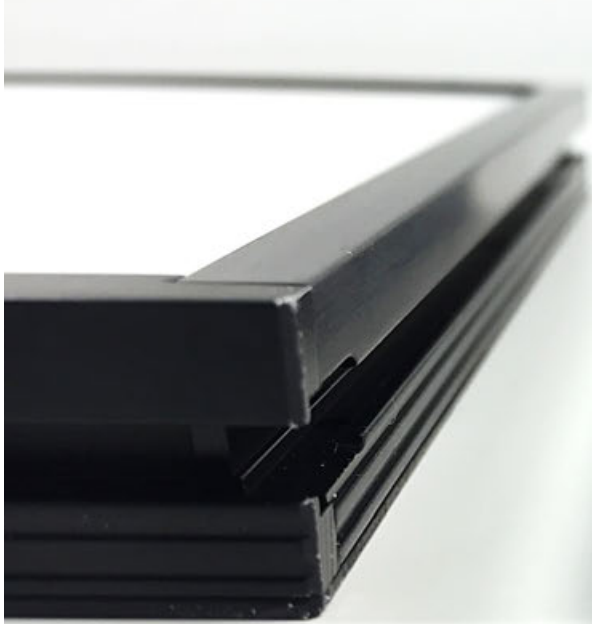
Structures and cracks in transparent plastics and glass become more visible.



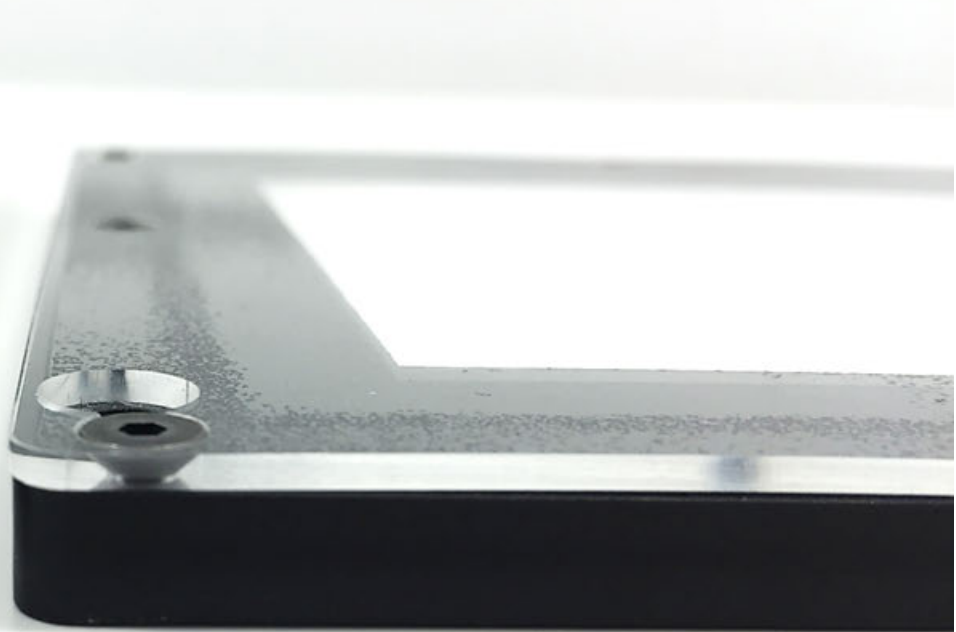
ADVANTAGE

# LESS THICK

Conventional backlight



PHLOX backlight



PHLOX backlight with its edge oriented LED design and light pipe diffuser techniques allow slim design factors.



ADVANTAGE

# IP65, RATED, SCRATCH RESISTANT



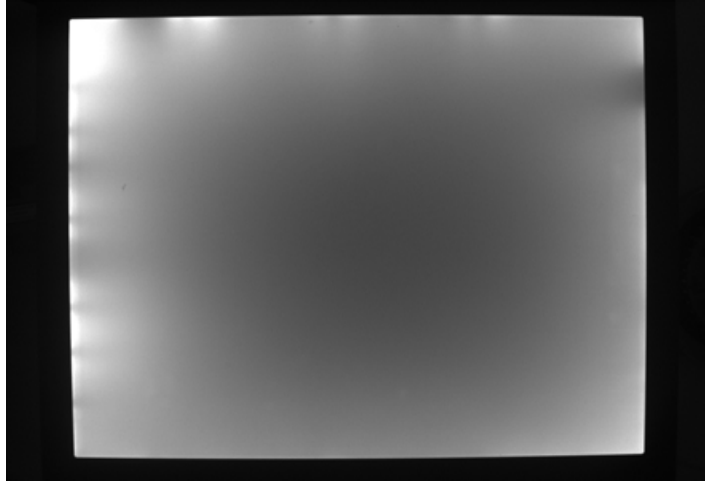
PHLOX backlight with monoblock aluminium body and sealed diffuser plate

- Ideal for wet and harsh environments
- Scratch resistant Gorilla Glass™ available on demand

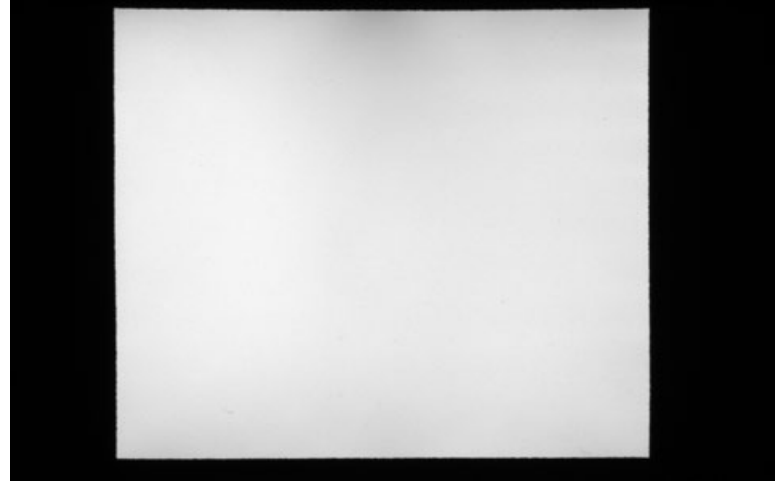


# EXTREME UNIFORMITY

Conventional backlight, edge illuminated (300x250mm)



PHLOX backlight



PHLOX light pipe diffuser techniques create more homogeneity.  
Natural light falloff and shading effects are compensated.

**Easier software programming and more stable results!**





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ADVANTAGE

## ALL COLOURS AVAILABLE

SOLVE ANY APPLICATION WITH THE RIGHT WAVELENGTH

PHLOX offers a full colour spectrum for it's illuminations.  
Red, Green, Blue, White, Full colour RGB or Infrared  
with different wavelengths will help to solve applications.



ADVANTAGE

# ALL COLOURS AVAILABLE

SOLVE ANY APPLICATION WITH THE RIGHT WAVELENGTH

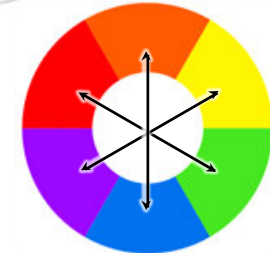
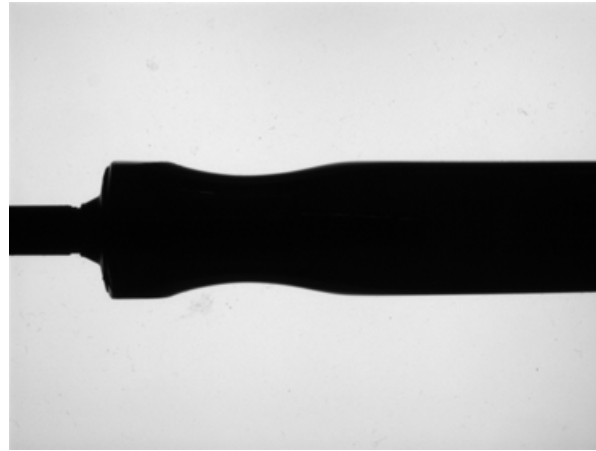


## INSPECTION OF COLOURED PARTS:

Red leds & red object



Green leds & red object



Complementary contrasts

With identical lighting colour, the inspected semitransparent object will appear brighter, complementary colours will appear darker.



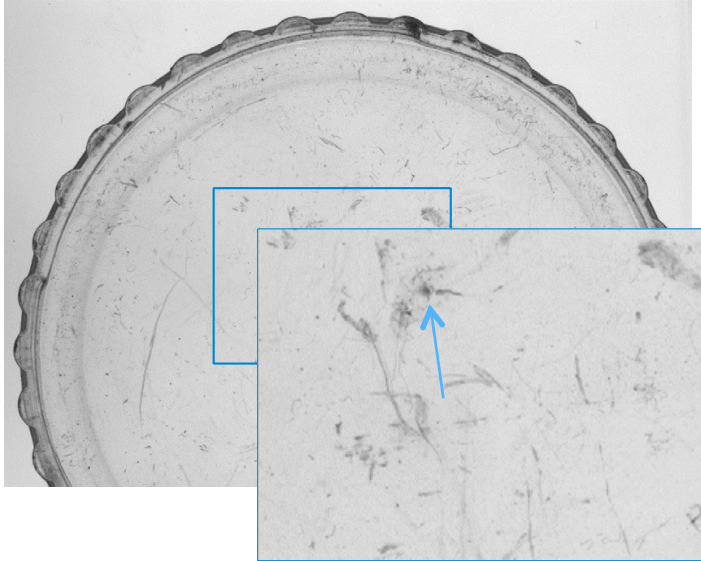
ADVANTAGE

# ALL COLOURS AVAILABLE

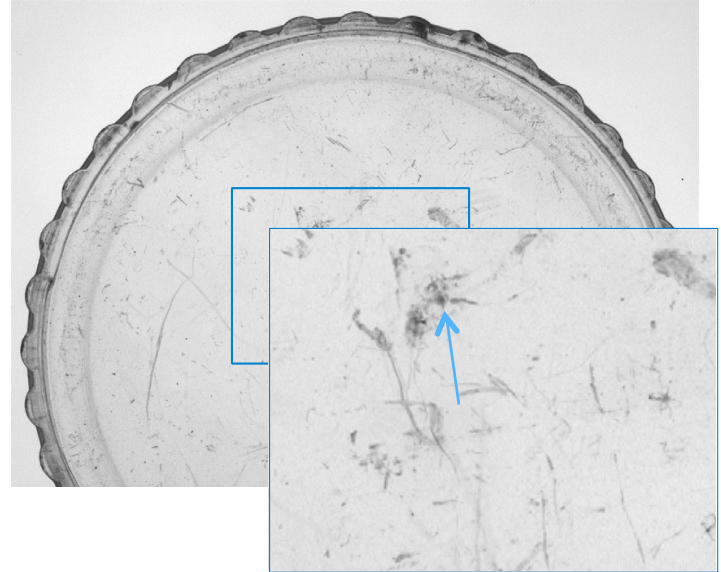
SOLVE ANY APPLICATION WITH THE RIGHT WAVELENGTH



Red PHLOX backlight



Blue PHLOX backlight (better contrasts)



Create contrasts with semitransparent, non coloured objects.  
Blue wavelength creates more scattering light, less transmission.

**More contrast helps to detect scratches.**

(Scratches anyway better visible with collimated Phlox illumination. See slide 6)



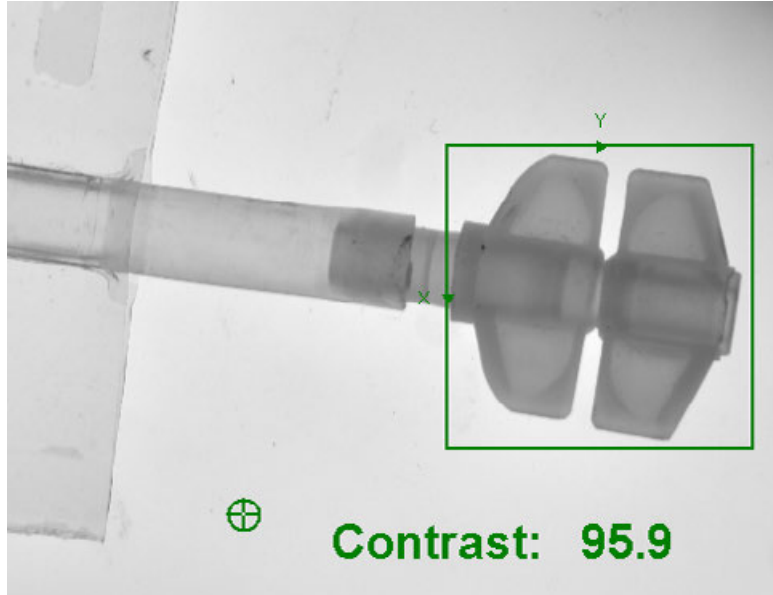
ADVANTAGE

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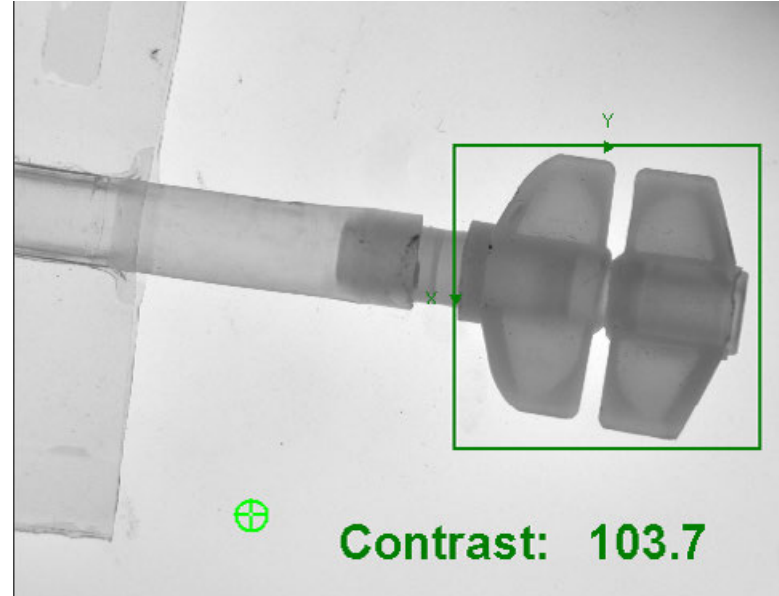
SOLVE ANY APPLICATION WITH THE RIGHT WAVELENGTH



Red PHLOX backlight



Blue PHLOX backlight (better contrasts)



Create contrasts with semitransparent objects.

Blue wavelength creates more scattering light, less transmission.

**More contrast helps to detect small defects and causes more robust applications.**



ADVANTAGE



# ALL COLOURS AVAILABLE

SOLVE ANY APPLICATION WITH THE RIGHT WAVELENGTH

Different optical limiting resolution

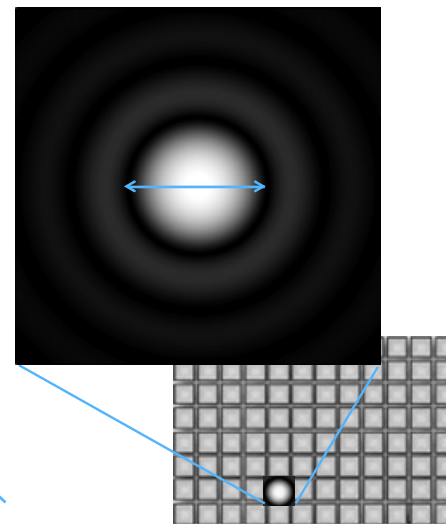
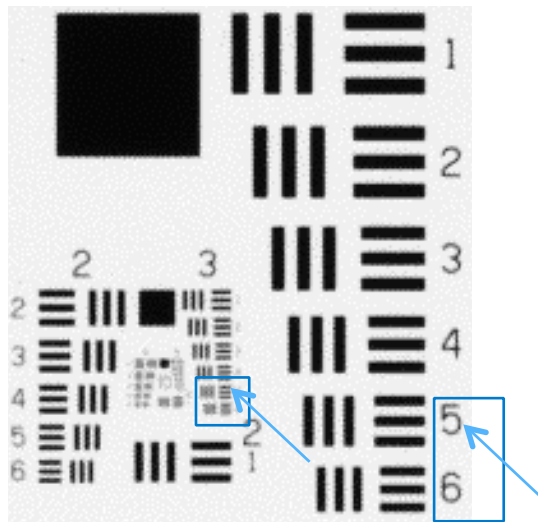
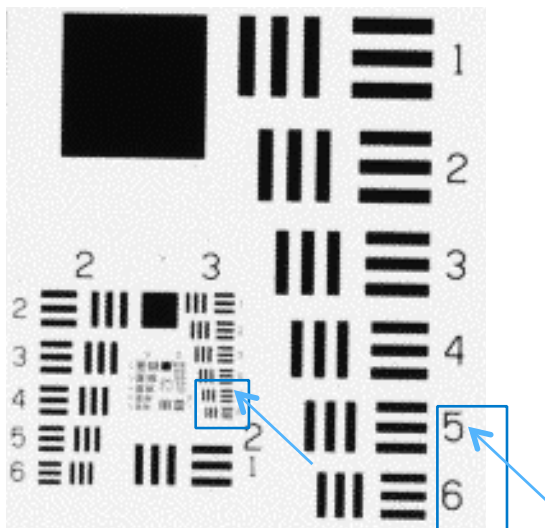
More resolution using shorter wavelengths

Blue vs Red (f-stop 8 @ 3.75μm sensor pixels)

“Airy disk” diameter

(diameter of light spot, diffraction limited)

$2.44 * f\text{-number} * \text{wavelength}$





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