

**Gigabitfilm is not a Hoax!**

Always committed to prove the optical performance not just in computer simulation, but also on film, Carl Zeiss faced a new challenge early in 2004, when the first prototypes of the new ZM lens family for the Zeiss Ikon camera approached field testing. Until then, Carl Zeiss had identified the orthochromatic black & white film Agfaortho 25 as the material with the highest resolving power commercially available: 250 linepairs per millimeter. This resolution was reliably and repeatedly achieved with many Carl Zeiss camera lenses, among them highly acclaimed medium format optics like the Superachromat 5,6/250, but even with a medium format bread-and-butter lens like the Distagon 3,5/60. Thus, in terms of resolving power, Carl Zeiss medium format lenses beat most 35 mm lenses by far – contrary to popular belief.

In the design of the ZM lenses our lens designers enjoyed the freedom to create optics with almost no limitation in terms of clearance between lens and film. This should lead to unprecedented performance, which includes unprecedented resolving power, like in the Biogon 4,5/38 for the Hasselblad Superwide and the Biogon lenses in the Contax G autofocus lens range. How would we find out in the real world with films that limit us at 250 lp/mm?

Having heard impressive claims about Gigabitfilm, we included this material in our prototype tests of the ZM lenses.

The results in brief:

1. ZM lenses can record on Gigabitfilm structures with 400 linepairs per millimeter.
2. Photographers who strive to capture outstandingly detailed images and can do with black & white will highly appreciate the combination of the new ZM lenses and Gigabitfilm.

#### New Film Resolving Power Data

Kodak Supra 800: 80 lp/mm  
 Maco Ortho PO 100: 80 lp/mm  
 Kodak Tech Pan: 140 lp/mm  
 Kodak Supra 400: 100 lp/mm  
 Fuji Neopan Acros 100: 160 lp/mm  
 Kodak Farbwelt 100: 160  
 Kodak Farbwelt 400: 160  
 Fujichrome Velvia 100 F: 170  
 Gigabitfilm: 400