

modern tests

All in all, we found the XE-7 to be a real pleasure to use; its well-thought-out design, conveniently-placed controls, remarkable quietness, and high level of construction and finish make it worthy of serious consideration by anyone interested in a top-quality automatic SLR.

COMPACT 28MM F/2.8 MULTICOATED NIKKOR

MANUFACTURER'S SPECIFICATIONS: 28mm f/2.8 Nikkor lens in bayonet mount for Nikon and Nikkormat cameras. **FEATURES:** Apertures to f/22, focusing to 1 ft. (0.3m), accepts 52mm accessories. **PRICE:** \$315.

Could the famous six-element 28mm f/3.5 Nikkor finally be headed for retirement? We think this is probably so, and it'll be replaced with the just as small, but faster, seven-element f/2.8. A sure sign of its advanced optical design is the front lens element's diameter—the f/3.5 in the old retrofocus configuration (inverted tele/wide-angle formula) has a huge front element. The newer f/2.8, although faster, has a smaller-diameter front element. Overall, the f/2.8 is 2½ in. long (54mm) with a diameter of 2¾ in. (60mm); it weighs 8½ oz. (241g).

Cosmetically, there have been numerous changes. The f/2.8 sports the latest rubberized, studded, focusing ring surface, much more grippable than the old all-metal knurling. The f/2.8 has integrated coatings on some of its elements (multicoating), but then again, so do the latest batch of f/3.5's. However, Nikon isn't providing any legible hints on the new lenses as to whether they use IC coating or not; i.e., the lens ring, once a source of all sorts of fascinating information—such as the number of elements (H on the f/3.5 indicated 6)—now tells you nothing at all except the serial number, focal length and aperture. The "C," which was becoming the standard indication for the presence of integrated coating, does not appear.

Optically, here's what our lab and field tests revealed about the 28mm f/2.8 Nikkor:

Central image quality: Central color fringing and spherical aberrations were well controlled, even at maximum aperture, in both our slides and our lab tests. Focus shift was extremely slight, measuring a mere 0.01mm.

Edge image quality: Lateral color fringing was also well corrected in our slides and on the optical bench. Astigmatism, however, was rather strong, particularly when we examined it in blue and green light on our optical bench. On both the bench and our test

Resolution Power

28mm f/2.8 Nikkor No. 382404 At 1:48 Magnification				
f/no.	Center Lines/mm		Corner Lines/mm	
2.8	V/Good	54	Exc.	43
4	V/Good	48	Exc.	48
5.6	Good	54	Exc.	48
8	Good	54	Exc.	54
11	Exc.	60	Exc.	54
16	Exc.	60	Exc.	48
22	Good	48	Exc.	43

Actual Focal Length: 28.7mm

Image Contrast

28mm f/2.8 Nikkor No. 382404 At 30 lines/mm				
f/no.	Center Percentage		Corner Percentage	
2.8	Low	48	High	42
4	Medium	59	High	46
5.6	Medium	68	Medium	46
8	Medium	68	Medium	45
11	High	65	Medium	38
16	Medium	58	Medium	38
22	Low	47	Medium	36

slides, astigmatic streaks mostly disappeared by f/5.6. However, in examining slides shot between f/2.8 and f/5.6, we could see a double-line effect in out-of-focus images caused by this aberration. Coma was well corrected; it was prominent (in the form of skew-ray flare) only at f/2.8.

While we found that the corrections for residual flare and ghosts were well done, the front ring of the lens was capable of producing reflections, resulting in ghost images at full aperture under certain lighting conditions. However, these disappeared almost immediately as the lens was closed down.

While it's been some seven years since we've tested the 28mm f/3.5 Nikkor, we thought it might be interesting to see how they compare. The older lens did just about as well centrally, but at the edges, the new lens was far, far superior.

ONE WIDE, ONE TELE FOR OLYMPUS OM-1

MANUFACTURER'S SPECIFICATIONS: 24mm f/2.8 H. Zuiko Auto-W in mount for Olympus OM-1 cameras. **FEATURES:** Apertures to f/16, focusing to 10 in. (0.25m), accepts 49mm accessories. **PRICE:** \$279.95.

135mm f/2.8 E. Zuiko Auto-T in mount as above. FEATURES: Apertures to f/22, focusing to 4½ ft. (1.5m), accepts 55mm accessories. **PRICE:** \$249.95.

In keeping with Olympus' policy of offering highly portable optics for the super-compact Olympus OM-1 SLR, they have now given us a pair of lightweight f/2.8 optics in two crucial focal lengths, 24mm and 135mm. Both are nicely finished in the traditional Olympus manner with satin black barrels, cross-hatched rub-

berized focusing collars, and chrome rear rings incorporating a depth-of-field scale.

Starting with the extra-wide-angle member of this impressive duo we have an eight-element, seven-group lens of roughly the same size as the standard 50mm f/1.8 Zuiko. It weighs a mere 6½ oz. (184 g), extends 1¼ in. (31mm) from the camera body at infinity, has a maximum diameter of 2¼ in. (58mm), and reaches its closest focusing distance in a smooth, 74° turn of its ¾-in.-wide (10mm) focusing collar. Despite its short focal length, its wide aperture assures that it snaps in and out of focus with reasonable precision on the standard OM-1 microprism screen. What follows are the results of our optical bench and test slide analysis of the 24mm f/2.8 Zuiko.

Central image quality: Central color fringing was very well controlled, being barely visible on the bench and on test slides at maximum aperture, and eliminated by f/5.6. Spherical aberration correction was likewise excellent, exhibiting barely discernible flare wide open and none at f/5.6 on our test slides.

Edge image quality: Lateral color was very well controlled across the entire field, as borne out in both the optical bench and test slide analyses. On the bench a moderate amount of astigmatism was observable wide open, but this was mostly gone by f/4 and wasn't observable on our transparencies even at maximum aperture. A moderate amount of skew-ray flare (coma) was evident in the outer ½ of the image field at maximum aperture, but it was mostly gone by f/4 on the bench and by f/5.6 on our test slides. Residual ghosts and flare were held to very low levels throughout—a much better than average overall performance.

Turning to the 135mm f/2.8 E. Zuiko, we have a five-element,

Resolution Power

24mm f/2.8 Zuiko Auto No. 100174 At 1:50 Magnification				
f/no.	Center Lines/mm		Corner Lines/mm	
2.8	V/Good	50	Exc.	45
4	Exc.	70	Exc.	50
5.6	Exc.	80	Exc.	50
8	Exc.	70	Exc.	50
11	Exc.	70	Exc.	50
16	Exc.	63	Exc.	50

Actual Focal Length: 25.1mm

Image Contrast

24mm f/2.8 Zuiko Auto No. 100174 At 30 lines/mm				
f/no.	Center Percentage		Corner Percentage	
2.8	High	65	High	50
4	High	65	High	57
5.6	Medium	71	High	68
8	Medium	74	High	70
11	High	68	High	64
16	High	66	High	62

Resolution Power

135mm f/2.8 Zuiko Auto No. 100693 At 1:50 Magnification				
f/no.	Center Lines/mm		Corner Lines/mm	
2.8	Exc.	50	V/Good	32
4	Exc.	50	V/Good	32
5.6	V/Good	50	Good	35
8	Exc.	56	Good	35
11	Exc.	56	Exc.	45
16	Exc.	56	Exc.	45
22	V/Good	45	V/Good	35

Actual Focal Length: 134.3mm

Image Contrast

135mm f/2.8 Zuiko Auto No. 100693 At 30 lines/mm				
f/no.	Center Percentage		Corner Percentage	
2.8	Medium	44	High	46
4	Medium	58	High	50
5.6	Medium	66	High	55
8	High	69	High	54
11	High	71	High	53
16	High	67	High	49
22	High	66	Medium	46

five-group lens which is still impressively compact for its speed and focal length. It weighs in at 13 oz. (369 g), extends 3½ in. (80mm) from the camera body at infinity, measures 2½ in. (60mm) in diameter, and focuses to its closest focusing distance in a smooth, 200° turn of its ¾-in.-wide (18mm) rubberized focusing ring. It also stops down to a useful f/22, and incorporates a built-in sliding sun shade that adds an additional ¾ in. (21mm) to its length when extended. Like the 24mm (and other Zuiko lenses), this 135 features a white-on-black metric focusing scale, and a somewhat less visible orange-on-black footage scale.

Although the 135mm f/2.8 Zuiko is twice as heavy as the 24mm f/2.8, it balances very nicely on the OM-1 camera and snaps into focus with considerably more alacrity (which is hardly surprising in view of its more limited depth of field). Here are the results of our optical bench and field test slide analyses.

Central image quality: Although on-axis fringing was substantial at maximum aperture, it was greatly reduced by f/5.6 and gone by f/8. Moderate flare at f/2.8 was also eliminated by f/5.6, both on the bench and in our test transparencies. A moderate but tolerable amount of de-centering was observed.

Edge image quality: Lateral color was well controlled except for moderately strong purple fringing in the corners of our transparencies. Astigmatism was likewise noticeable toward the edges of the field, but was more pronounced on the optical bench than in our test slides, where it was mostly gone by f/5.6. Coma was exceptionally well controlled across the entire field even at maximum aperture, and residual ghosts and flare were virtually absent.—THE END