

## Design



The AF-S 50mm F1.4 G is a well-made lens, and very much in the modern design idiom with styling similar to the [AF-S 35mm F1.8G DX](#), and a finish which matches current cameras such as the D300. The build feels as good as anything else in its class (and notably more solid than Canon's EF 50mm F1.4 USM), and includes a rubber 'O' ring around the mount to help seal against dust and water getting into the camera body. The front element is deeply recessed in the barrel (by 18mm at infinity focus) which should provide useful protection against stray light and flare, and the entire optical unit moves forward within the barrel by about 9mm on focusing from infinity to 0.45m.

### Compared to Nikon AF-Nikkor 50mm F1.4D



The AF-S Nikkor 50mm F1.4G replaces the older AF-Nikkor 50mm F1.4D, and here are the two side-by-side. The addition of the AF-S autofocus motor has resulted in a significant increase in bulk: the new lens is about 14% larger in diameter, 28% longer and 26% heavier than its predecessor (and now similar in size to the Canon EF 50mm F1.4 USM); it also uses larger 58mm filters. The other obvious physical change, as implied by the 'G' designation, is the loss of the aperture ring: the depth of field scale has also shrunk considerably in width, and the infra-red correction mark has disappeared.

Internally, of course, the two lenses are distinctly different, with the new model sporting a revised optical formula, and a 9-bladed circular aperture design for improved rendition of out-of-focus regions of the frame.

### On the camera



While larger than its predecessor, the 50mm F1.4G is not a particularly big lens, and still considerably smaller than even the 18-55mm kit zoom. It balances well on all of Nikon's DSLRs from small to large, making a particularly compact package on the lower-end bodies such as the D5000. The focus ring is conveniently positioned towards the front of the barrel, and the focus mode switch ideally placed for operation by the left thumb.

## Autofocus




One of the headline features of the 50mm F1.4G in comparison to its predecessor is the new built-in Silent Wave autofocus motor, which gives full compatibility with all of Nikon's DSLRs including the entry-level D40, D40X, D60 and D5000. The focusing is smooth and almost completely silent in operation, and we found it to be generally accurate and consistent.

In terms of focus speed, however, it's quite clear that the older, 'D' lens generally surpasses the new model. To quantify this, we conducted some basic focus speed tests, using the Nikon D300 as the test body. In the first test, the camera was placed 1 meter from a high contrast focus target, the lens set to infinity and the time required to achieve focus measured (using a sensitive microphone to record focus motor noise). In the second test, we pointed the camera at a featureless white target and measured the time the lens took to drive from infinity to closest focus (0.45m) and back. In both cases, 'lag' represents the time between pressing the shutter button and the focus motor starting to move. The light level was approximately 10 EV, and all times reported are the average of three measurements.

	Infinity - 1m		Inf - 0.45m - inf	
	Lag	AF	Lag	AF
Nikon AF-S Nikkor 50mm F1.4G	0.24 sec	0.34 sec	0.33 sec	1.31 sec
Nikon AF-Nikkor 50mm F1.4D	0.26 sec	0.21 sec	0.31 sec	0.85 sec

The conclusion is that the 50mm F1.4 G's AF-S motor is about 50% slower at driving the lens than the D300's in-body motor is with the 'D' version. Note however that the scenario we've used (infinity to 1m, chosen to give reasonably reproducible and reliable timings) is not necessarily representative of typical use, for which distance changes between shots tends to be much smaller. In actual use, the 'G' lens may not be quite as snappy as the 'D', but it rarely causes you to miss a shot.

## Lens body elements

	<p>The lens uses Nikon's venerable F mount, and will fit all of their DSLRs, both DX and FX format. It communicates with the body electronically via an array of contact pins, with mechanical control of the aperture using a metal lever.</p> <p>A rubber gasket around the mount provides a degree of protection against dust and moisture ingress into the camera.</p>
	<p>The filter thread is 58mm, and does not rotate on autofocus, which is good news for polarizer users.</p> <p>This view also shows how deeply recessed the front element is into the barrel at infinity focus.</p>
	<p>The bayonet-fit HB-47 lens hood is supplied as standard. It is 36mm deep and painted black in the inside to minimize reflection of light into the lens. When not in use it can be reversed for storage.</p>

	<p>The focus ring features an 9mm-wide ribbed rubber grip, and the action is smooth and precise. It rotates a generous 190 degrees anti-clockwise from infinity to 0.45m, allowing accurate manual focus.</p> <p>The angle of view noticeably decreases on focusing closer, as is inevitable with unit-focusing primes.</p>
	<p>A distance scale is provided with markings in both feet and meters, and includes a rather small depth of field scale marked for F11 and F16. This is calibrated for the 35mm full-frame format, so will be less useful for DX format shooters.</p>
	<p>A standard focus mode selection switch inhabits the side of the lens barrel, and disables autofocus when set to the 'M' position.</p> <p>When set to M/A, the lens will autofocus (as long as the camera body is also set to AF), but the focus distance can still be adjusted manually if desired.</p>

### Reported aperture vs focal length

This lens allows an aperture range from F1.4 to F16 to be selected.