

Nikkor AF 105mm f/2 D DC - Review / Test Report

Lens Reviews - Nikon / Nikkor (APS-C)  
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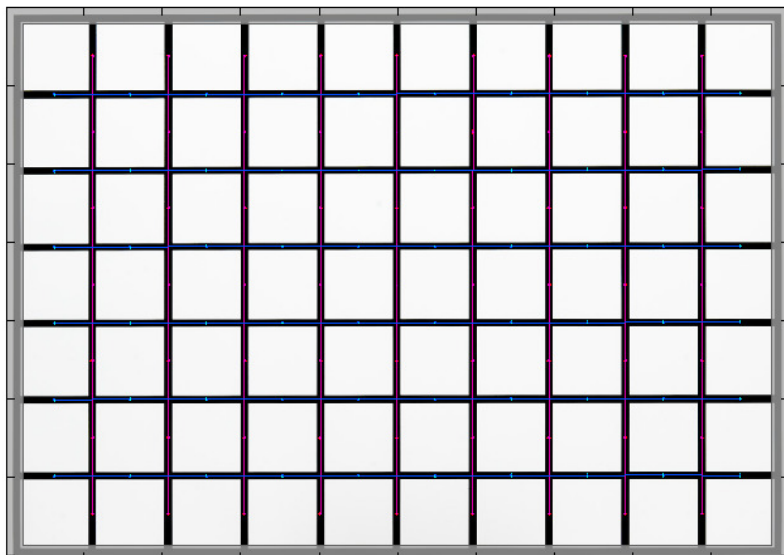
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**Distortions**

The DC-Nikkor shows an extremely low level of distortions (0.12%) which is absolutely negligible in field conditions.

Distortion: 3rd order correction 17-Feb-2007 15:44:50  
105mm



SMA TV Distortion = -0.116%  
 $k_1 = 0.00188$  ( $r_u = r_d + k_1 r_d^3$ )  
 (r in center-corner units)  
 $h_1, h_2 = 0.0102, -0.00829$   
 PW Pro Coeff. = 0.0075  
 PW Pro Scale = 0.9994  
 Line calc: 3rd order

**Selected EXIF data**  
 File: 2007:02:17 15:41:50  
 Make: NIKON CORPORATION  
 Model: NIKON D200  
 Taken: 2007:02:17 14:24:33  
 Res: 1000 x 705  
 FL:  
 Exp: 2.500 s

Aper: f/16.0  
ISO: 200

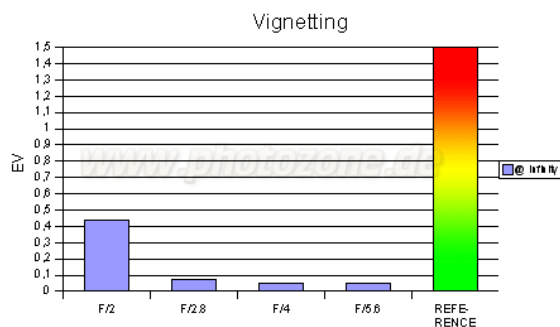


The chart above has a real-world size of about 120x80cm.

**Vignetting**

Thanks to the sweet spot behavior on the D200 vignetting is very well controlled and it is generally no problem to use this lens even at the max. aperture setting (f/2).

Vignetting	F/2	F/2.8	F/4	F/5.6
@ infinity	0,44	0,07	0,05	0,05



**MTF (resolution)**

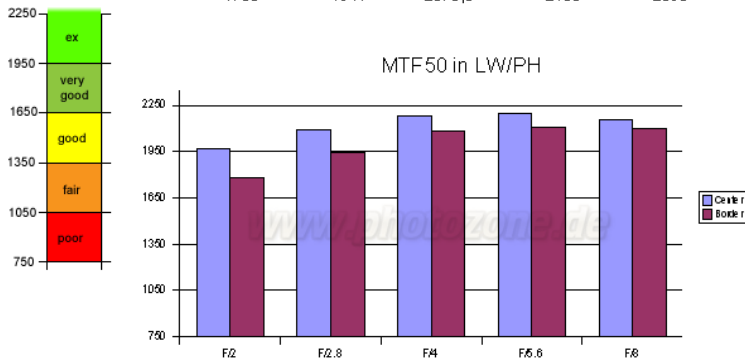
The Nikkor was only tested at the neutral DC setting. The resolution figures are already very good at f/2 and increase to excellent levels beyond. The sweet spot is reached around f/5.6.

With activated Defocus Control (other than f=R or F) the corresponding image softening also affects the resolution and contrast performance to varying degree but by doing so the quality of the bokeh is of primary interest and less so the sheer resolution.

Below is a simplified summary of the formal findings. The chart shows in line widths per picture height (LW/PH) which can be taken as a quantity for sharpness. The chart is limited to the visually relevant LW/PH range of [750, 2250]. If you want to know more about the MTF50 figures you may check out the corresponding [Imatest Explanations](#).

Rating Scale: **Nikkor AF 105mm f/2 DC**  
 Nikon (10mp)

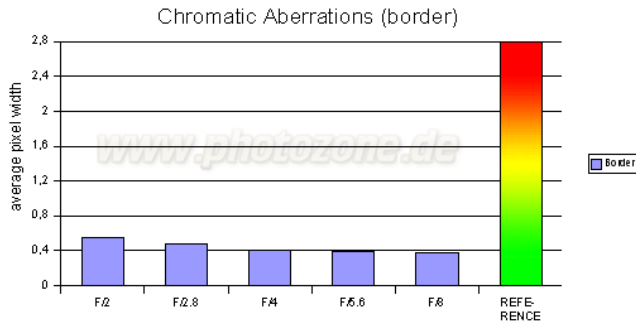
max:	105mm	F/2	F/2.8	F/4	F/5.6	F/8
Center	1965	1965	2094	2180	2195	2158
~2320 LW/PH	Border	1783	1941	2078,5	2105	2098



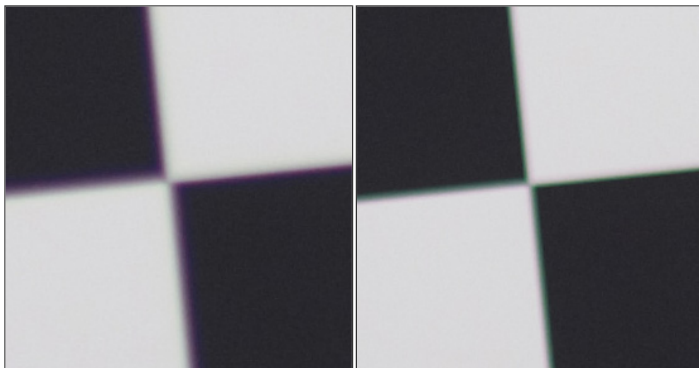
**Chromatic Aberrations (CAs)**

Lateral chromatic aberrations (color shadows at harsh, in-focus contrast transitions) are very low at around 0.5px on the average at the image borders.

CAs	F/2	F/2.8	F/4	F/5.6	F/8
Border	0,55	0,48	0,4	0,39	0,38



Typical for many ultra-large aperture lenses the DC-Nikkor suffers a bit from Longitudinal Chromatic Aberrations (LoCA) resulting in greenish and reddish out-of-focus edge transitions.



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