REPRODUCTION RATIOS OBTAINABLE WITH PB-6 — continued

(mm)

Lens	Mounting position	Subject field / Reproduction ratio	∞ x ∞	360 x 240	180 x 120	144 x 96	108 x 72	72 x 48	36 x 24	18 x 12	12 x 8	9 x 6	7.2 x 4.8	6 x 4	5.1 x 3.4	4.5 x 3	4 x 2.7	3.6 x 2.4	3.3 x 2.2	3 x 2	Remarks
		Reproduction ratio	1/∞ x	1/10 x	1/5 x	1/4 x	1/3 x	1/2 x	1 x	2 x	3 x	4 x	5 x	6 x	7 x	8 x	9 x	10 x	11 x	12 x	
55mm f/2.8 AF Micro	Normal	Extension						48	55	110	165	208									Image quality is best at f/8.
		Working distance						(1/1.1 x)				(3.8 x)									
								53.5	45.5	18.0	8.8	5.0									
	Reverse	Extension							118	128	183	208									Image quality is best at f/8.
		Working distance							(1.8 x)			(3.5 x)									
									63.9	61	51.8	49.4									
58mm f/1.2 Noct	Normal	Extension						48	58	116	174	208									Unsuitable for copying.
		Working distance						(1/1.2 x)				(3.6 x)									
								74	61.7	32.7	23.0	19.9									
	Reverse	Extension							88	125	183	208									Corner image quality deteriorates at smaller reproduction ratios.
		Working distance							(1.4 x)			(3.4 x)									
									76	63	53	50									
60mm f/2.8 AF Micro	Normal	Extension						48	60	120	180	208									Image quality is best at f/8 and deteriorates at smaller aperture.
		Working distance						(1/1.3 x)				(3.5 x)									
								84	66	36	26	23.2									
	Reverse	Extension							118	154	208										
		Working distance							(1.4 x)			(2.9 x)									
									76.4	63.5	54.2										
85mm f/2 f/1.4	Normal	Extension						48	85	170	208										The further the lens is stopped down, the better the image quality.
		Working distance						(1/1.8 x)			(2.4 x)										
								210	140	97	90										
	Reverse	Extension					90	103	146	208											Corner image quality deteriorates at smaller reproduction ratios.
		Working distance					(1/3.0 x)			(1.7 x)											
							290	200	120	83											
85mm f/1.8AF	Normal	Extension						48	84.8	170	308										The further the lens is stopped down, the better the image quality. Unsuitable for copying.
		Working distance						(1/1.8 x)			(2.5 x)										
								177	112	69.4	61.6										
	Reverse	Extension						102	124	208											Image quality is best at f/8.
		Working distance						(1/1.3 x)		(2.0 x)											
								147	118	76.1											
105mm f/2.8 Micro	at ∞ Normal	Extension						48	53	105	208										Use f/11—f/16 for the better image quality.
		Working distance						(1/2.2 x)		(2.0 x)											
								330	310	205	153										
	at ∞ Reverse	Extension	137	148	158	163	172	190	208												
		Working distance	∞	1084	559	454	349	244	189	(1/1.5 x)											
	at 0.41m Normal	Extension								48	123	208									Image quality is best at f/5.6—f/11.
		Working distance								(1.1 x)		(3.0 x)									
										158	123	109									
	at 0.41m Reverse	Extension		153	160	168	172	179	193	208											
		Working distance	(1/75)							(1/1.5 x)											
			6150	816	404	322	239	157	112												
f/4 Micro 105mm f/2.5 f/1.8	Normal	Extension						48	53	105	208										The further the lens is stopped down, the better the image quality.
		Working distance						(1/2.2 x)		(2.0 x)											
								300	280	170	120										
	Reverse	Extension					133	142	151	168	208										Corner image quality deteriorates at smaller reproduction ratios.
		Working distance					(1/6.1 x)				(1/1.1 x)										
							670	450	350	240	150										

*The closer the focus distance, the better the image quality.

REPRODUCTION RATIOS OBTAINABLE WITH PB-6

(mm)

Lens	Mounting position	Subject field / Reproduction ratio	∞ × ∞	360 × 240	180 × 120	144 × 96	108 × 72	72 × 48	36 × 24	18 × 12	12 × 8	9 × 6	7.2 × 4.8	6 × 4	5.1 × 3.4	4.5 × 3	4 × 2.7	3.6 × 2.4	3.3 × 2.2	3 × 2	Remarks
			1/∞ ×	1/10 ×	1/3 ×	1/4 ×	1/3 ×	1/2 ×	1 ×	2 ×	3 ×	4 ×	5 ×	6 ×	7 ×	8 ×	9 ×	10 ×	11 ×	12 ×	
20mm f/2.8 f/3.5	Reverse	Extension											86	106	127	147	167	188	208		Image quality is best at f/8.
												(5.0 ×)							(11.0 ×)		
		Working distance											37.6	36.8	36.3	36.0	35.7	35.4	35.2		
24mm f/2.8, f/2.8AF f/2	Reverse	Extension										83	111	135	160	184	208				Image quality is best at f/8.
											(3.9 ×)							(9.0 ×)			
		Working distance										39.8	38.4	37.6	37	36.6	36.2				
f/3.5PC 28mm f/2.8, f/2.8AF f/2	Normal	Extension							48	58	86	108									The further the lens is stopped down, the better the image quality.
								(1.7 ×)				(3.7 ×)									
		Working distance							9.6	6.7	1.9	0									
	Reverse	Extension									76	100	129	158	187	208					The further the lens is stopped down, the better the image quality.
										(3.2 ×)						(7.7 ×)					
		Working distance									42.6	40.7	39.3	38.3	37.6	37.2					
35mm f/2 f/1.4	Normal	Extension							48	72	108	144	154								The further the lens is stopped down, the better the image quality.
								(1.3 ×)					(4.3 ×)								
		Working distance							18.6	9.6	3.6	0.6	0								
	Reverse	Extension								89	105	141	177	208							Image quality is best at f/8.
										(2.6 ×)					(5.9 ×)						
		Working distance								47.6	45.5	42.5	40.7	39.6							
35mm f/2.8 f/2.8PC Series E 35mm f/2.5	Normal	Extension							48	72	108	144	180	208							The further the lens is stopped down, the better the image quality.
								(1.3 ×)							(5.8 ×)						
		Working distance							24.2	15.2	9.1	6.2	4.4	3.4							
	Reverse	Extension								83	105	141	177	208							Image quality is best at f/8.
										(2.4 ×)					(5.9 ×)						
		Working distance								48.5	45.5	42.5	40.7	39.6							
f/1.8, 50mm f/1.4, f/1.3 f/1.4AF	Normal	Extension							48	52	103	155	208								The further the lens is stopped down, the better the image quality. *
								(1/1.1 ×)				(4.0 ×)									
		Working distance							58.2	54.3	28.5	19.9	15.5								
	Reverse	Extension								79	102	153	205	208							Image quality is best at f/8. **
									(1.6 ×)					(4.1 ×)							
		Working distance							66.5	59.3	50.7	46.9	46.2								
50mm f/1.8AF	Normal	Extension							48	51.6	103	155	208								The further the lens is stopped down, the better the image quality ***
								(1/1.1 ×)				(4.0 ×)									
		Working distance							69.3	65.4	39.6	31	26.6								
	Reverse	Extension								76.2	110	161	208								Image quality is best at at f/8.
									(1.4 ×)					(3.9 ×)							
		Working distance							71.7	59.3	50.7	46.7									
f/2.8 Micro 55mm f/3.5 Micro f/1.2	Normal	Extension							48	55	110	165	208								Image quality is best at f/8 and deteriorates at smaller aperture. The 55mm f/1.2 lens is unsuitable for copying.
								(1/1.1 ×)				(3.8 ×)									
		Working distance							65.4	57.4	29.9	20.7	16.9								
	Reverse	Extension								99	128	183	208								
									(1.5 ×)				(3.5 ×)								
		Working distance							70.9	61.0	51.8	49.4									

*Use f/5.6 or smaller apertures with 50mm f/1.2; unsuitable for copying.

** The further the lens is stopped down, the better image quality the 50mm f/1.2 offers; unsuitable for copy work at smaller reproduction ratios.

*** To get a better image at any aperture with an reproduction ratio 2X or more, use the reverse ring.

(mm)

Lens	Mounting position	Subject field / Reproduction ratio	∞ x ∞	360 x 240	180 x 120	144 x 96	108 x 72	72 x 48	36 x 24	18 x 12	12 x 8	9 x 6	7.2 x 4.8	6 x 4	5.1 x 3.4	4.5 x 3	4 x 2.7	3.6 x 2.4	3.3 x 2.2	3 x 2	Remarks
			1/∞ x	1/10 x	1/5 x	1/4 x	1/3 x	1/2 x	1 x	2 x	3 x	4 x	5 x	6 x	7 x	8 x	9 x	10 x	11 x	12 x	
f/3.5 135mm f/2.8 f/2 Series E 135mm f/2.8	Normal	Extension						48	68	135 208											The further the lens is stopped down, the better the image quality.
		Working distance						(1/2.8 x) ●	●	● (1.5 x)											
								520	410	280 230											
	Reverse	Extension	180	194	208																Corner image quality deteriorates at infinity.
		Working distance	● ∞	● 1400	● (1/4.8 x) 680																
180mm f/2.8ED f/2.8ED AF	Normal	Extension					48	60	90	180 208											Image quality is best at f/8.
		Working distance				(1/3.7 x) ●	●	●	●	● (1.2 x)											
						826	691	511	331	307											
200mm f/4	Normal	Extension				48		67	100	208											The further the lens is stopped down, the better the image quality.
		Working distance				(1/4.2 x) ●		●	●	● (1.0 x)											
						1200		920	720	520											
200mm f/4 IF Micro	Normal	Extension				48	50	67	100	208											The further the lens is stopped down, the better the image quality.
		Working distance				(1/4.2 x) ●	●	●	●	● (1.0 x)											
						990	957	754	557	349											

Working distance: Distance between the subject plane in focus and the front edge of the lens barrel; with the lens mounted in reverse, the distance is between the subject and the rear edge of the lens barrel.

Note: 1) Reproduction ratios are those obtained at infinity.

2) If more than one lens is included in each lens column (i.e., 24mm f/2.8 and f/2), the reproduction ratios apply only to the first lens (i.e., 24mm f/2.8).

3) The 180mm f/2.8, 180mm f/2.8 ED, 135 mm f/2, 85mm f/1.4, 28mm f/3.5 PC and AF 180mm f/2.8 ED lenses cannot be used in the reverse position because of the larger size of their attachments. To mount the Nikkor 20mm f/2.8 or 105mm f/1.8 in the reverse position, use the optional Nikon Macro Adapter Ring BR-5.

4) For close-ups and macrophotography, the following lenses are especially recommended: 55mm f/2.8 Micro, 55mm f/3.5 Micro, 105mm f/2.8 Micro, 105mm f/4 Micro, 200mm f/4 IF Micro, 50mm f/1.8, Series E 50mm f/1.8, etc.