



MID-RANGE FOCUS OPTIMIZER 3 (MFO-3)
FOCUS RANGE TO 0-150CM WITH FULL FRAME NIKON 105MM

	CAMERA LENS	GEAR	PORT ADAPTOR / EXTENSION RING	EXTENSION RING / PORT CONVERTER	PORT	MOUNT CONVERTER	WET LENS	OPTICAL PERFORMANCE
N120 CINEMA SYSTEM FOR EF & RF-MOUNT (RED, CANON, PANASONIC, Z-CAM, BLACKMAGIC)	MACRO FULL FRAME							
	Canon EF 100mm f/2.8L Macro IS USM	19523 C100IS-F			18703 Macro Port 94	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	On Full Frame Sensor Max. Magnification 0.9X Working Distance 0-1490mm Lens FOV 24° Converted FOV 40°
N120 CINEMA SYSTEM Z-MOUNT (RED, KODAK-X, VRAPIOR[X])	MACRO FULL FRAME							
	Canon RF 100mm f/2.8L Macro IS USM	19575 CRF100-F * please contact us if SA control is needed			18703 Macro Port 94	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	On Full Frame Sensor Max. Magnification 0.9X Working Distance 0-1490mm Lens FOV 24° Converted FOV 40°
N120 CINEMA SYSTEM Z-MOUNT (RED, KODAK-X, VRAPIOR[X])	MACRO FULL FRAME							
	Nikon AF-S Micro NIKKOR 60mm f/2.8G ED with Nikon FTZii mount adaptor	TBD Focus Gear (V2)			18701 Macro Port 60	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	On DX Sensor Max. Magnification 0.5X Working Distance 0-1500mm Lens FOV 24° Converted FOV 44°
N120 CINEMA SYSTEM Z-MOUNT (RED, KODAK-X, VRAPIOR[X])	MACRO FULL FRAME							
	Nikkor Z MC 105mm f/2.8 VR S Macro	TBD Focus Gear (V3)	22120 N120 Extension Ring 20 II		18708 Macro Port 80 18701 Macro port 60	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	On Full Frame Sensor Max. Magnification 0.9X Working Distance 0-1500mm Lens FOV 23° Converted FOV 38°
N120 NIKON F-MOUNT	MACRO FX							
	Nikon AF-S Micro NIKKOR 60mm f/2.8G ED	19121 N60G-F			18701 Macro Port 60	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	On DX Sensor Max. Magnification 0.5X Working Distance 0-1500mm Lens FOV 26.5° Converted FOV 44°
N120 NIKON F-MOUNT	MACRO FX							
	Nikon AF-S VR Micro-NIKKOR 105mm f/2.8G IF-ED	19122 N105VR-F			18702 Macro Port 87	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.8X Working Distance 0-1490mm Lens FOV 23° Converted FOV 38°
N120 NIKON Z-MOUNT (Z7II / Z8 / Z9)	MACRO FX							
	Nikkor Z MC 105mm f/2.8 VR S Macro	19161 (V1) / 19200 (V2) NZ105VR-F (V1) / Z105VR-F (V2)	22120 N120 Extension Ring 20 II		18708 Macro Port 80 18701 Macro port 60	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 0-1500mm Lens FOV 23° Converted FOV 38°
N120 NIKON Z-MOUNT (Z7II / Z8 / Z9)	MACRO FX							
	Nikkor Z MC 105mm f/2.8 VR S Macro	19231 (V3) Z105-F (V2) / Z105-FH (V3)	22125 N120 Extension Ring 25 II		18708 Macro Port 80	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 0-1500mm Lens FOV 23° Converted FOV 38°
N120 NIKON Z-MOUNT (Z6II / Z5II)	MACRO FX							
	Nikkor Z MC 105mm f/2.8 VR S Macro	19200 (V2) / 19231 (V3) Z105-F (V2) / Z105-FH (V3)	22125 N120 Extension Ring 25 II		18708 Macro Port 80	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 0-1500mm Lens FOV 23° Converted FOV 38°
N120 CANON EF-MOUNT	MACRO FULL FRAME							
	Canon EF 100mm f/2.8L Macro IS USM	19523 C100IS-F			18703 Macro Port 94	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 0-1490mm Lens FOV 24° Converted FOV 40°
N120 CANON RF-MOUNT	MACRO FULL FRAME							
	Canon RF 100mm f/2.8L Macro IS USM	19575 + 19576 CRF100-F + SA Control Ring			18703 Macro Port 94	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 0-1490mm Lens FOV 24° Converted FOV 40°
N120 PANASONIC L-MOUNT	MACRO FULL FRAME							
	Panasonic Lumix S 100mm f2.8 Macro Lens	19732 PL100-F			18709 Macro Port 27	83214 Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.8X Working Distance 0-1500mm Lens FOV 24° Converted FOV 40°
N120 FUJIFILM G-MOUNT	MACRO MEDIUM FORMAT							
	Fujifilm GF 120mm f/4 Macro R LM OIS WR	19823 GF120-F	22160 N120 Extension Ring 60 II		18701 Macro Port 60	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 15-1500mm Lens FOV 25.7° Converted FOV 43°
N100 CANON RF-MOUNT	MACRO APS-C							
	Canon RF 100mm f/2.8L Macro IS USM	19575 CRF100-F	37305 N100 to N120 35.5mm Port Adaptor II	37430 N100 Extension Ring 30 II	37126 N100 Macro Port 105 18703 Macro Port 94	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 0-1490mm Lens FOV 15° Converted FOV 25°
N100 SONY E-MOUNT	MACRO FULL FRAME							
	Sony FE 90mm f/2.8 Macro G OSS	37147 SE90-F			37126 N100 Macro Port 105	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.8X Working Distance 0-1500mm Lens FOV 27° Converted FOV 45°
N100 SONY E-MOUNT	MACRO FULL FRAME							
	Sony FE 100mm F2.8 Macro GM	37182 SE100-F			37180 N100 Macro Port 125	81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.9X Working Distance 0-1500mm Lens FOV 24° Converted FOV 40°
N85 MICRO FOUR THIRDS SYSTEM	MACRO FOUR THIRDS							
	Olympus M.Zuiko Digital ED 60mm f2.8 Macro	36149 O60-F		36620 N85 Extension Ring 20	36163 N85 Macro Port 65 36135 N85 Macro Port 45	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.5X Working Distance 0-1500mm Lens FOV 20° Converted FOV 33°
N85 MICRO FOUR THIRDS SYSTEM	MACRO FOUR THIRDS							
	Panasonic LEICA DG MACRO-ELMARIT 45mm F2.8 ASPH. MEGA O.I.S.	36145 P45-F			36135 N85 Macro Port 45	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.4X Working Distance 0-1500mm Lens FOV 27° Converted FOV 45°
TELEPHOTO MACRO FOUR THIRDS	TELEPHOTO MACRO FOUR THIRDS							
	OM System M.Zuiko Digital ED 90mm f/3.5 Macro IS PRO	36072 O90-F * Focus Knob is included in packaging			36169 N85 Macro Port 120 with Focus Limit Switch Selector * optical performance at Normal Macro mode	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	Max. Magnification 0.7X Working Distance 0-1480mm Lens FOV 14° Converted FOV 23°
N85 SONY E-MOUNT	MACRO FULL FRAME							
	Sony FE 90mm f/2.8 Macro G OSS	36175 SFE90-F	36204 N85 to N120 60mm Port Adaptor II * This setup is only compatible with with 36204 SN:A457812 onwards, older version 36204 can be upgraded using lock mechanism 95851	36205 N85 to N100 65mm Port Adaptor	18701 Macro Port 60 37123 N100 Macro Port 55 * This setup is only compatible with 37123 SN:A175724 onwards	SMC/CMC Option 1 - M67 Thread 81228 M67 Spacer Ring for SMC/CMC (included in all SMC/CMC packaging) SMC/CMC Option 2 - Bayonet Mount 83250 + 83214 M67 to Bayonet Mount Converter II + Bayonet Mount Adaptor for SMC/CMC	81503 MFO-3	On APS-C Sensor Max. Magnification 0.8X Working Distance 0-1500mm Lens FOV 18° Converted FOV 30°

81503
Mid-range Focus Optimizer 3

Specifications

Dimension (mm)	:	OD 84mm x 114.2mm
Weight in Air	:	602g
Buoyancy in Water	:	Negative 120g
Body Construction	:	Hard-anodized aluminum alloy
Lens Construction	:	4 elements in 3 groups
Lens Coating	:	Anti-reflection Coating
Working Distance	:	0-150cm
Magnification	:	0.9x
Mount Thread Diameter	:	M67
Depth Rating	:	100m

Package includes

- MFO-3
- Front hard lens cap
- Rear lens caps
- Neoprene Bag
- Cleaning Cloth
- M67 Spacer ring

Last Updated : 2025-10-24

* This port chart is subject to updating as new information becomes available