

NIKON Z MC 105mm MACRO LENS (A General Overview)



Robert Thompson



Helen's Bee Orchid Ophrys helenae found in Greece. Close-up of the small individual flower head. The lens renders superb detail in the flower structure. Nikon Z 9, 105mm macro, ISO 200 @ f/11.



The Nikon Z 105mm f/2.8 VR S mounted on the Z 9, supported on the Novoflex MagicBall and PRO 75 tripod.

INTRODUCTION

Nikon announced the release of two new macro lenses at the beginning of June 2021 for the Z mount, the Z MC 50mm f/2.8 and the Z MC 105mm f/2.8 VR S. These are the first native macros to be added to an already expanding line up of lenses for the Z mirrorless system. I have been using the Z 105mm since its release last year and testing it with a range of subjects and in combination with the Z 7II, Z 9 and other macro setups that I currently use. The Z MC 105mm f/2.8 VR S is intended for full-frame cameras such as, the Z 6II, Z 7II and the Z 9. It is without doubt Nikon's most popular focal length macro. Its F mount predecessor has had a long history with



Early Thorn Selenia dentaria The 105mm is ideally suited to subjects where you need to have a reasonable working distance to prevent casting a shadow as in this case. Nikon Z 7II, 105mm macro, ISO 400 @ f/11.

modifications and upgrades since its development back in the early 1970s.

The Z MC 105mm is an important addition in the Z lens line up, not only for the professional sector, but it will also be a welcome addition for macro photographers in general who have had to use the F mount AFS VR 105mm version via the FTZ adapter up until now. Although lighter than its F mount equivalent, the new 105mm macro is slightly larger in size, but the filter diameter remains the same.

Historically, Nikon chose the word 'Micro' rather than 'Macro' for its description of these specialist lenses, which dates back to the 1950's. The word 'Micro' can be misleading for many photographers that are not familiar with the



Nudaurelia eblis An almost life-size reproduction of the hindwing eyespot on this moth. When working at magnifications close to 1:1, a tripod is essential in my opinion. Nikon Z 7II, 105mm macro, ISO 200 @ f/11.

conventional definition between macro and micro. Photomacrography, is normally defined as reproduction from 1:1 up to around 10:1. Photomicrography, is reproduction of subjects greater than 10:1 using a microscope. The Z 105mm is optimised for conventional and general close-up photography up to 1:1 (life-size) and is normally referred to as a macro lens. The word 'macro' is a frequently misused term to define for the most part, close-up photography. True macro reproduction begins from 1:1 and above.

Nikon has shown a real commitment over the years and supported the macro community with a variety of focal length macro glass. Although the 105mm historically was and still is the most popular focal length in 1993 they

introduced the 200mm $f/4$ AF-D macro. It was another milestone for them being the first 1:1 200mm macro produced. Surprisingly, and to my disappointment, it remains to this day unchanged and has had no design updates despite being one of the most important focal length macros among professional and serious amateur photographers. It is, without doubt, the most essential of all the macro lenses in my kit. Although sadly discontinued, the optics even today are still superb. The majority of my close-up imagery is shot on this lens. To date, there has been no indication from Nikon that they will produce a redesigned Z version of this lens, although I sincerely hope they do. There are many photographers out there who would gladly buy a new Z equivalent of the lens. However, it has become much harder to find second-hand and despite its age, it still holds its value. Having owned three of the 105mm Nikon macros, also the 85mm PCE and the 200mm $f/4$ AF-D, I can testify to just how sharp and well-designed all these lenses are.



The Nikon 105mm AI. Nikon introduced this all-manual macro lens in 1977. Even to day these lenses deliver excellent sharpness and rich colour balance.

THE HISTORY OF THE NIKON 105mm MACRO LENS

Before discussing the Z MC 105mm $f/2.8$ VR S in detail, it's worth charting the history of this remarkable focal length lens since its introduction back in 1974.

The Nikon 105mm macro lens has a long-chronicled history. The short-mount $f/4$ version first appeared back in 1974 and was used on bellows. The AI version appeared in 1977 and was updated to AI-s $f/4$. It received another upgrade to the AI-s $f/2.8$ in 1983. The optical and mechanical characteristics of these lenses had an excellent reputation and was widely used among the macro fraternity at that time. These earlier lenses were an all-manual helical design, with a maximum magnification of 1:2.



AI-s 1981-1983. Still about today and can occasionally be found in specialist camera stores and on eBay.

Using a manual macro even today is not a disadvantage. I use all my macros in manual virtually all the time, so I have complete control over the point of focus. One of the downsides of the helical design is the fall-off in light as the magnification increases and the lens-to-subject distance is reduced. The $f/4$ version was replaced in 1983 with the $f/2.8$ AI-s to help alleviate this problem. Nikon also developed a short-mount version of this lens for bellows work which had the same optical configuration.



AF D 1990-2007. I still have fond memories of this lens as it was the first macro I owned and kept for many years.

The lens had another update in 1990 when the new nine-element $f/2.8$ AF version became available. The new lens design was also capable of 1:1 reproduction, allowing greater magnifications which was a welcome upgrade from its predecessor removing the need for extension tubes to achieve lifesize. The increased reproduction ratio made it the ideal choice for many photographers engaged in commercial and general close-up photography. The lens had another tweak in 1993 and became the 105 AF-D. The lens had its final update in 2006, and became the Nikon AF-



The current F mount 105 is still the default macro for DSLR's. It has built in VR and can be used on the Z system with the FTZ adapter. Up until the release of the Z 105mm I was using this lens on the Z 7II and later the Z 9.

S VR $f/4$ G IF-ED and was the first macro lens to have VR (Vibration Reduction) incorporated into it: the ED signifying extra-low dispersion glass to reduce the effect of chromatic aberration. The current F mount version is not compatible with earlier cameras, but it is still an outstanding lens in my opinion. I used this lens a lot before I went mirrorless especially in combination with the 1.7 X converter to push the reproduction ratio up and when working in restricted situations where it's difficult to use Nikon's 200mm $f/4$: my default macro for the majority of my work.

Z MC 105mm $f/2.8$ VR S MACRO OVERVIEW

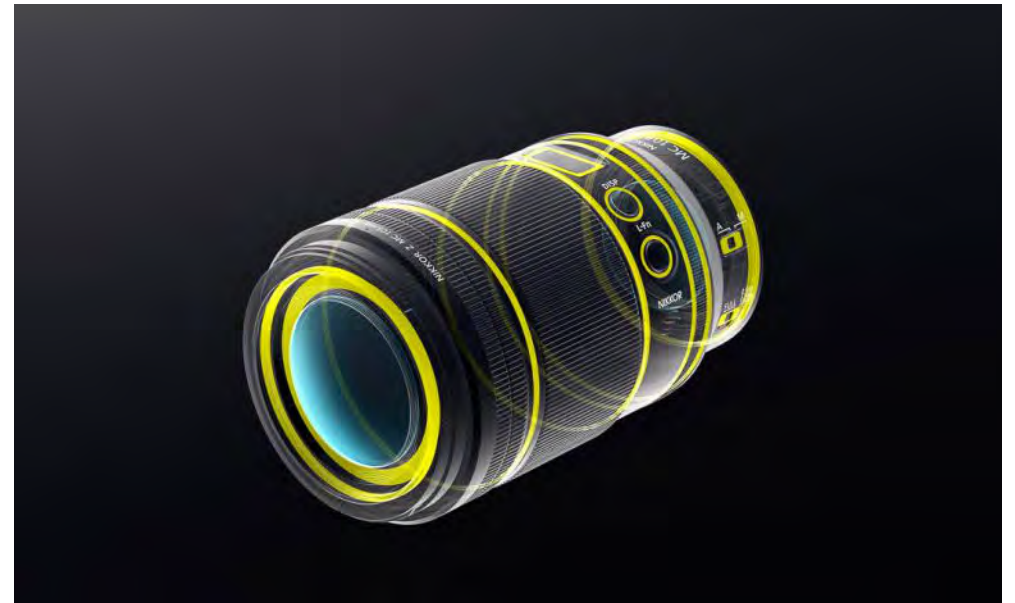
The Z MC 105mm $f/4$ is Nikon's first macro in the Z lens line up. It was widely anticipated that this focal length would be the most obvious choice to begin with. The lens is part of the S-line series and therefore manufactured



Brimstone Moth Opisthograptis luteolata The build quality and optics on this lens deliver superb colour rendition and contrast. Nikon Z 7II, 105mm macro, ISO 200 @ f/11.



The Z MC 105mm macro announced in June 2021. Along with the Z 50mm macro announced at the same time these are only two macro lenses currently available for the Z system.



The weather sealing on the lens is excellent, what you would expect in a pro-level lens. I have had this lens out in all sorts of weather with no issues at all.

to the highest professional standards. In addition to state-of-the-art optics, it has the best in terms of build quality and weather sealing around the mount and other vulnerable



A hand-held shot of air bubbles trapped and swirling around in the calm stretches of a waterfall. It was impossible to use a tripod. I held the Z 9 with the 105mm attached and used autofocus. The results were consistently sharp on every image. Nikon Z 9, 105mm macro, ISO 12800, @f/11.

parts. I have had this lens out in all sorts of weather with no issue of the rain or dust penetrating through any of the exposed parts.

Of the three focal length macros, the 105mm has always been the most popular choice for the vast majority of photographers engaged in close-up photography. Lenses in this focal range are extremely sharp and generally of a less complex design. They suffer to a lesser extent from chromatic related issues and tend to be well corrected for flatness of field. It is an ideal balance when it comes to handholding and weight compared to longer focal length macros in the region of 180-200mm range, which tend to have tripod collars are essentially best supported on a tripod. The Z 105mm internal floating element system

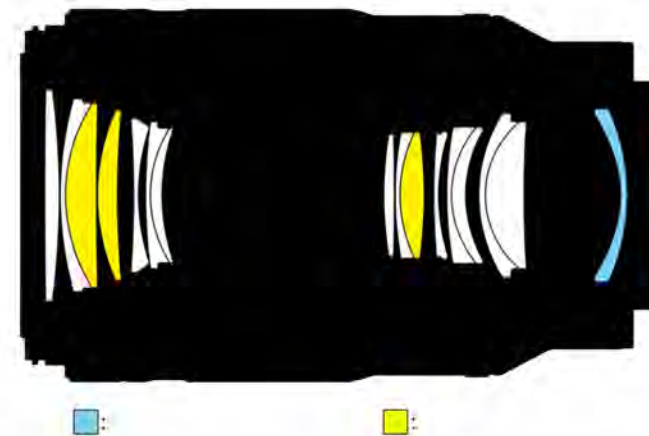


Angel's Bonnet Mycena arcangeliana Working in light rain is often a regular occurrence for me. This was one of the first images I shot with the Z 9 and the Z 105mm of this small fungus. Nikon Z 9, 105mm macro, ISO 200 @f/11.



Although the Z 105mm is slightly larger than the AF-S 105mm, it is lighter and has several additional features which allows a range of different functions to be operated from the lens.

ensures that it is optimised to deliver the best in terms of sharpness throughout different focusing points. Optically, the Z 105mm has a more complex lens arrangement than its F mount predecessor. The Nikon AF-S VR $f/2.8$ G IF-ED has 14 elements arranged in a 12-group configuration with single ED (extra-low dispersion glass) component. The redesigned Z 105mm macro has 16-elements arranged in 11



Aspherical Lens Element ED Lens Elements

Illustration showing the position of the 3 ED lens elements and the single aspherical lens, a major contributing factor to its superb sharpness.

groups with three ED elements to reduce chromatic aberration. There is a single aspherical element to reduce coma distortion and maintain sharpness throughout the frame. In addition to the Nano Crystal Coating, Nikon has also added an ARENO coating to some elements, which helps to reduce ghosting and flare when photographing into direct sunlight. In addition, it has a special fluoride coating on the front element, which helps to repel dust and water.

As with the F mount version, it has a nine-blade arrangement with a maximum aperture of $f/2.8$, which changes to $f/4$ when the lens is at its maximum magnification of 1:1. The minimum aperture is the same as the F mount lens $f/32$. The Z MC 105mm is a slightly longer macro at 140mm (5.5in) compared to 116mm (4.6in) on the F mount equivalent. However, the addition of the FTZ adapter increases the overall length of the lens. The maximum diameter of the lens is 85mm (3.3in).



Illustration showing the difference in size between the F and Z mounts. The larger diameter allows Nikon to explore the latest optical developments in lens design which were difficult to implement in the smaller F mount version.

The minimum focusing distance is also closer at 0.29m from the sensor compared to 0.31m on the 105mm F mount. The newly developed Z mount has allowed Nikon to take advantage of the latest advances in optical design and development and are no longer restricted by the limitations imposed by the smaller F mount diameter. The Z lens range are generally lighter than their F mount equivalents, and that is the case here with a saving of 120g however, this does not include the FTZ adapter. Weighing only 630g you are immediately aware of this when holding the lens in your hand for the first time. When the lens is mounted on a Z 6II or Z 7II the combined setup is much lighter overall compared to the F mount version on a D850.

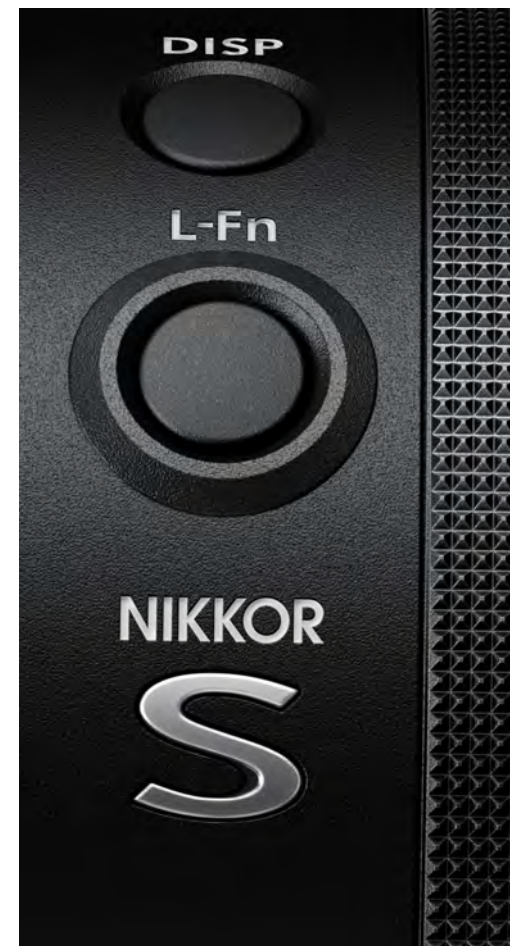
The auto/manual and restricted focus switches (while more retracted) are easily accessible with your thumb or index finger. When activated, it confines the focusing range between 0.5m to 0.29m making it more responsive in the macro range and restricts focus hunting. Further along the lens on the left are the DISP and L-Fn switches. The DISP



The auto/manual and restricted focus switches are now integrated into the lens housing unlike the F mount version, which has them embedded on a raised platform.

switch when pressed, activates a small OLED screen on the top of the lens. Pressing the button allows you to scroll through a series of options such as ISO, aperture, depth of field and focus distance.

The resistance on the focus and control ring is nicely balanced and much more responsive than the F mount 105mm. On rotation, it moves extremely smoothly between your fingers and thumb making it easy to make very small





precise adjustments to the focus point. The control ring is customisable via the camera's menu system for ISO, aperture and exposure compensation. Some photographers will find this useful; I tend to use it for ISO changes. The screen and viewfinder can display the distance scale once the ring is rotated. You can also reverse the direction of rotation of the ring if you own a Z 6II or Z 7II. The lens also has VR technology included giving you 4.5 stops of VR and 5-axis compensation when you use a Z series body, which is controlled internally by the camera and not via a switch on the lens. However, this is much less effective when shooting macro but ideal for normal distant subjects.

As I have already stated the filter diameter is the same as its predecessor at 62mm ensuring compatibility with other Nikon accessories. Also, most photographers own additional filters and being able to utilise them on the new lens without having to purchase additional step-up rings is an advantage. One feature I would have liked to see on this lens is a tripod collar: it's extremely useful when switching between formats without having to disengage the camera from the tripod head each time. One aspect that impressed me a lot about this lens is its sharpness. I found using it conventionally as a short telephoto the results were extremely good even wide open but stopping the lens down does improve central and overall sharpness. Most macros these days are not completely corrected for true flatness of field and show a slight softening towards the edges, this would be evident if you were photographing documents but not that apparent with 3-dimensional subjects. Stopping down to smaller apertures does improve things, I also found the results I got

Vapourer moth larva Orgyia antiqua The sharpness in addition to the colour and contrast of this lens in resolving detail is outstanding in my opinion. Nikon Z 7II, 105mm macro, ISO 200 @ f/11.

at $f/11$ to be very acceptable. Chromatic aberration is extremely well controlled in this lens and barely evident at all. It was more noticeable in the F mount lens especially when focus stacking.



Monkey Orchid Orchis simia A recent workshop in northern Greece gave us the opportunity to shoot the florets of this colourful orchid in close-up. Overall sharpness and contrast is excellent. Nikon Z 9, 105mm macro, ISO 125 @ f/11.

IN THE FIELD

I have been using the Z MC 105mm $f/2.8$ VR S with the Z 7II and Z 9 for some time now in the field. I am impressed just how good this lens is compared to its predecessor which is a great lens but the advancement in optical technology really does put these modern Z lenses in a class of their own. I have to admit I've been choosing it in preference to the 200mm $f/4$ when shooting fungi, lichens and some other static subjects especially where the background does not demand a longer focal length macro.

The redesign, although lighter has not compromised the lens in any way. The distribution of weight is evenly spread creating a nice overall balance in the hand. The materials and design are in keeping with the other Z lenses in the line-up although it seems at first glance a little less robust, this is certainly not the case. The optical performance is excellent and the autofocus is very responsive when I need it. The lens has VR which works in unison with any IBIS Z camera. Shooting at higher magnifications camera shake is always going to be intensified especially with a high megapixel camera such as Z9 and Z 7II. VR in these situations is welcome inclusion if you are not a devoted tripod user. However, I rarely shoot without a tripod and only when actively staking insects during the day.

As already mentioned earlier, the maximum aperture on the lens is $f/2.8$ dropping to $f/4.5$ when the lens is at 0.29. Aperture variation is controlled seamlessly by the camera on the fly. If you want to shoot at $f/2.8$ then you need to ensure that the focused distance is beyond 1.5m giving an



Scarlet Elf Cup Sarcoscypha austriaca My routine setup in the field for reproduction up to 1:1. Nikon Z 9, 105mm macro supported on the Novoflex MagicBall and PRO75 TrioPod. Z 9, 105mm macro, ISO 100 @ $f/11$.

overall reproduction ratio of approximately 1:15 or slightly less. The bokeh with this lens is also excellent even in the mid-range and up close producing a nice soft diffused background. The lens delivers superb sharpness with excellent contrast when used as conventional telephoto as well as a dedicated macro. I always liked the colour balance of Nikon glass and much prefer it over other independent makes simply to have continuity in colour and contrast throughout my lenses and images.

Manually focusing the lens is routine for me and the redesigned focusing ring works seamlessly and is highly responsive. The lens seems to have variable focusing capabilities, especially when working at distances near infinity where it focuses quickly with only a small rotation of the focusing ring. In the macro zone, the lens rotation covers shorter distances for a similar rotation which I find to be beneficial making it easier to make small precise incremental changes to the focus position which is important when focus stacking.

Being a mid-telephoto lens, it's ideal for landscapes when you need a bit more reach than the 24-70mm. Unlike the majority of other lenses most of which are curved field, it delivers excellent edge-to-edge sharpness across the whole format. There are few lenses that possess dual functionality which makes it an important lens to have in my bag. I also find myself routinely reaching for this lens when shooting landscapes especially since I went mirrorless. It's an ideal lens when you want to isolate a subject or part of it within the landscape. Trees are an excellent example of this in which you can achieve the ideal balance between the subject and its immediate background. Buildings are another example when you want them to stand out from the background.



Holy Monastery of Varlaam Meteora, Kalambaka Greece. The 100mm macro is ideal when you want to isolate a particular part of the subject from the landscape. Nikon Z 9, 105mm macro, ISO100, @ f/11.



Judas Tree Cercis siliquastrum

I have photographed many of these trees in southern Europe over the years, but every now and then you come across one that is exceptional as in this case. On a recent workshop in northern Greece we found this tree high up in the hills. It was, without doubt, one of the finest examples of this tree I have ever come across. I had initially photographed it with the Z 14-30, which produced an excellent image however, I ventured up the hill and shot it with the Z 105mm macro and it proved to be a more engaging image with good separation from its background. The Z 105mm macro is ideally suited to situations such as this one. Nikon Z 9, 105mm macro, ISO 125 @ f/11.

Facing page Physcia leptalea The 105mm macro is capable of resolving every last detail in this small lichen growing on a tiny branch in northern Greece. Nikon Z 9, 105mm macro, ISO 100 @ f/11.

I have said it many times before that shooting on a tripod does make a big difference and you should always use one where possible to get the best from any lens including this one. I am always blown away when looking at my images just how incredibly sharp this lens is especially when I'm photographing subjects that have a lot of intricate detail such as lichens. The lens is capable of resolving an amazing amount of detail. In fact all of the Z lenses I currently use deliver superb sharpness, colour and contrast.

Having the option to program the lens is also an advantage for me. I can change the configuration depending on what I am shooting: a feature that was not possible with the previous F mount version of the lens. The addition of a control ring is another useful feature when you need to react to a changing situation quickly. Or the L-FN button which I often use as a depth of field indicator is another example of using a programmable lens?





The Nikon Z 9 with the Novoflex BALPRO-1 bellows, the Nikon Retro Reverse Adapter, Castel XQ II focusing rail, the Z 105mm MC macro lens attached. Supported on the Novoflex MagicBall. The ideal setup in my opinion when you want to achieve magnifications beyond 1:1.

Some of my work involves photographing at reproduction ratios greater than 1:1. The Z 105mm used in combination with the Novoflex BAL-F or BALPRO-1 bellows allows for magnifications much greater than 1:1. The bellows are fully automatic and with the appropriate Retro Reverse Adapter for your camera, reproduction ratios in the region of 3:1 are possible. I normally recommend magnifications greater than 2:1 are best achieved with an electronic rail attached to either bellows unit. Reproduction up to 2:1 can be successfully achieved in the field with a manual focusing rail such as the Novoflex Castel XQ II. The working distance between this lens and the subject is also good making it easy to add lighting or flash if required.



Columbine Flower Stamens Aquilegia species When I need additional magnification I use the setup illustrated which you can achieve magnifications up to around 3.5X. Z 9, Novoflex BALPRO-1 bellows, Z 105mm macro attached, ISO 200 @ f/11 focus stacked.



Pericallis species A 1.5X magnification of the central area of this small flower. A total of 30 images were shot to complete the final composite image. Novoflex BALPRO-1 bellows, Nikon Retro Reverse Adapter, Castel XQ II focusing rail, the Z 105mm macro lens ISO 400 @ f/11, focus stacked.

A FINAL WORD

Considering the improvements Nikon have made over the F mount version, the Z MC 105mm $f/2.8$ is an exceptional lens in my opinion. It has outstanding image quality not only as a macro but also as a general landscape and portrait lens making it possible to capture images with elaborate detail and clarity. It also represents excellent value for money and can cover a wide range of photographic situations. The vast majority of macro photographers will find the focal length of this lens ideal for mainstream macro with a reasonable working distance. The focal length is ideal for routine plant photography. I have shot many species with this lens and been thoroughly happy with the results. When you need to be creative then a longer focal length is a perhaps better option, but this has to be balanced against weight the need for a tripod. The 105mm is light and perfectly balanced for photographing insects on the move compared to the 200mm $f/4$ which is considerably heavier and is essentially a tripod macro.

The only minor disappointing aspect for me unlike the F mount version is not being able to add a converter for higher reproduction ratios. Achieving 2:1 reproduction as in the F mount is therefore not possible with this lens except through 3rd party accessories. Overall, this is long-awaited lens and an important addition to the Z line up. It's a great lens and one that every photographer should consider adding to their kit because of its all-round versatility and reasonable price.

Aoos Gorge northern Greece. The 105mm macro was the ideal choice here for isolating the waterfall from the rest of the gorge. Nikon Z 9 105mm macro, Nikon Polariser, NISI 6 stop ND, ISO 200 @ $f/11$.





Phalaenopsis Orchid flowers

ACKNOWLEDGEMENTS

I would like to express my grateful thanks to Rob MacNeice Senior Consultant Imaging Nikon UK and Head of Nikon Professional Services for his assistance and organising the various samples. For further information about this lens and NPS see the links below!



<https://nps.nikon.co.uk>



www.nikon.co.uk



Common Spotted Orchid Dactylorhiza fuchsii

Robert Thompson is a professional freelance natural history photographer, author and naturalist. He is a Fellow of the Royal Photographic Society and the Irish Photographic Federation; an acclaimed macro specialist in the UK and author of a number of books on natural history and photography. He also sat on the Natural History Board for the Royal Photographic Societies distinction awards. His work is widely published in the UK, Ireland and internationally, with numerous photographic credits in a wide variety of publications including Nikon Pro, Nikon NPS, Nikon Owners Magazine and other media sources. He is a frequent writer and contributor to the photographic press and specialist natural history publications. He has had several solo exhibitions of his photography and has worked on several high-profile natural history projects in Ireland and the UK. He runs workshops in Ireland and further afield.



THE Z MC 105mm MACRO GALLERY 1



Dwarf Tulipa Species I carefully exposed the leading stamen of this very small tulip flower to illustrate the internal structure. The composite image was focus stacked and a composite produced from 40 images. Nikon Z 9, Z 105mm macro, ISO 200 @ f/11.



Common Hawker Aeshna juncea Searching among the vegetation around small pools can be very productive when temperatures are below the threshold for flight. I was able to get in close on this large hawker dragonfly to reveal the metallic colouring in the large compound eyes. Nikon Z 7II, Z 105mm macro, ISO 800 @ f/11.

Bog Asphodel Narthecium ossifragum A small pretty flower that occurs in bogland habitats during early summer. Nikon Z 7 II, Z 105mm macro, ISO 400 @ f/11.



THE Z MC 105mm MACRO GALLERY 2



Top left

Fernsfly Dahlia A close-up of the central area of this attractive flower. Nikon Z 7II, Z 105mm macro, ISO 200 @ f/11.

Top right

Daffodil Narcissus Le Torch I was attracted to this flower because of its unusual central structure, which made an interesting abstract. Z 9, Z 105mm macro, ISO 200 @ f/11.

Left

Musk Mallow Malva moschata A 2X magnification of the stamens inside this attractive mallow plant. To achieve adequate depth of field it was focus stacked and the composite produced from 35 images. Nikon Z 7II, Z 105mm macro, ISO 400 @ f/11, Novoflex BALPRO-1 and Castel XQ II rail.



THE Z MC 105mm MACRO GALLERY 3



Above

Nudaurelia macrothyris An impressive saturniid moth that occurs in Africa. I wanted to show the moth in defence posture revealing the large red eyespots. Nikon Z 7II, Z 105mm macro, ISO 200 @ f/11.

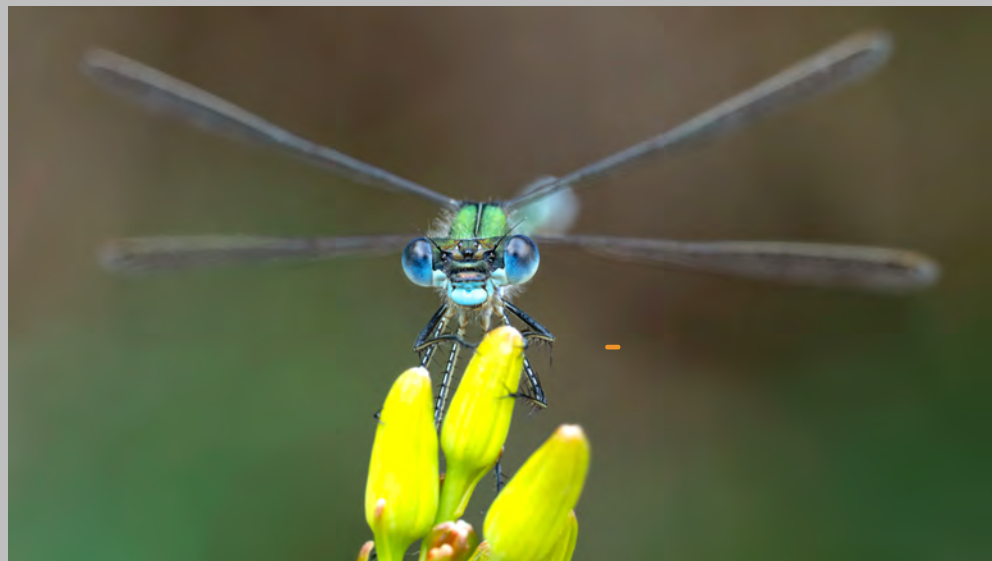


Top right

Common Rock Rose Helianthemum nummularium A pretty delicate flower found throughout most of Europe. The Z 105mm is ideal in situations where subjects are growing close to ground level as in this case. Nikon Z 9, Z 105mm macro, ISO 160 @ f/11.

Lower right

Emerald Damselfly Lestes sponsa A metallic green summer damselfly. The Z 105 is perfect for shooting insects on the move when it is difficult to use a tripod. In this case I wanted a head-on shot of the bright blue eyes. Nikon Z 7II, Z 105mm macro, ISO 400 @ f/11.



THE Z MC 105mm MACRO GALLERY 4



Above

Wood Hedgehog Mushroom Hydnum repandum I found several of these fungi growing among moss and decaying vegetation. It was among the first images I photographed with the Z 9 in towards the end of 2021. Nikon Z 9, Z 105mm macro, ISO 200 @ f/11.

Right

Holy Monastery of Rousanou, Meteora, Kalambaka, Greece The Z 105mm macro is ideal in this situation when you need a little extra reach to frame the subject rather than having to crop the image in post processing and losing pixels. It was extremely difficult in this case to use a tripod so I had to hand-hold the camera. Nikon Z 9, 105mm Z macro, ISO 400 @ f/11.



THE Z MC 105mm TECHNICAL SPECIFICATIONS

Type *Nikon Z mount*

Format *FX/35 mm*

Focal length *105 mm*

Maximum aperture *f/2.8*

Minimum aperture *f/32*

Lens construction *16 elements in 11 groups (including 3 ED elements, 1 aspherical element, elements with Nano Crystal and ARNEO coats, and a fluorine-coated front lens element)*

Angle of view *FX format: 23° 10', DX format: 15° 20'*

Focusing system *Internal focusing system*

Minimum focus distance *0.29 m (0.96 ft) from focal plane*

Maximum reproduction ratio *1x*

Vibration reduction *Lens shift using voice coil motors (VCMs)*

No. of diaphragm blades *9 (rounded diaphragm opening)*

Aperture range *At a focus distance of infinity: f/2.8 to 32, At a focus distance of 0.29 m (0.96 ft): f/4.5 to 51*

Coating *Nano Crystal Coat, Fluorine coat, ARNEO coat*

Filter attachment size *62 mm (P = 0.75 mm)*

Diameter x length *(extension from lens mount) Approx. 85 mm/3.4 in. maximum diameter x 140 mm/5.6 in. (distance to end of lens from camera lens mount flange)*



Weight Approx. *630 g (1 lb 6.3 oz)*

Autofocus *Yes*

Internal focusing *Yes*

Focusing *Auto, Manual*

Focus limit switch *Two positions: FULL (∞ to 0.29 m) and 0.5 m to 0.29 m*

Supplied accessories *LC-62B Lens Cap (front cap), LF-N1 Lens Cap (rear cap), HB-99 Lens Hood, CL-C2 Lens Case*

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Collared Parachute Marasmius rotula I found this tiny little fungi growing on a small decaying twig. Nikon Z 7II, 105mm macro, ISO 400 @ f/11.

[Right](#)

Yellow Planet Trumpet Lily A close-up of the delicate stamens of this lily. Nikon Z 7II, 105mm macro, ISO 400 @ F/11.





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