

Hello and thank you for making time to read this article. We had said it many a times in the past that we will start recommending mirrorless cameras for dental photography ONLY when a macro lens in the 85 to 105 mm category is available. That moment has finally arrived!



Image courtesy : <https://www.bhphotovideo.com>

Canon has announced its first telephoto macro lens in the RF (mirrorless full frame camera) series.

The Canon RF 85 mm IS f2 macro lens

But is this lens a good choice for a dentist? Read on to find out!!

For beginner enthusiasts:

We have camera types and that's why each camera type has its own unique mount identity.

For example: Canon Full frame DSLR mount is called EF mount

Canon Crop sensor mount is EF-S Mount

Canon full frame mirrorless camera is R mount

This is how we recognize what lens is for which camera system. The 85mm RF lens is thus made for Canon Full frame mirrorless cameras. Similarly the name "Canon 100 mm EF macro" signifies it is made for Canon full frame camera users.

We hereby call for entries:

Make a chart/table of all cameras types (All companies) and their respective camera mounts and email it to us on dentalphotographyschool@gmail.com

The best answers which cover all camera systems will be given the honor of being co-authors in this particular article.

Lately, there has been a huge buzz about "mirrorless cameras being the future." Everyone is suddenly wanting to buy a mirrorless camera. But is it really worth the hype? Or is it heard mentality?

We at dental photography school have always maintained that the Indian market is price sensitive. We love to save money.

Mirrorless cameras are not only more expensive but also the lens choices are less. We have always insisted that lens and flash are more vital in dental photography than the camera itself.

The arguments that mirrorless cameras supporters give are:

- 1) Mirrorless cameras have more resolution
- 2) Mirrorless cameras are light in weight
- 3) Focus peaking is a huge advantage

Let us now see, if they really hold true or we can bust some myths.

To be honest, one would not come to know whether a case was shot on a DSLR or a mirrorless camera even if a RAW file was given to anyone for analysis. A DSLR is capable of the same amount of resolution and sharpness that a mirrorless camera has to offer in dental photography.

Mirrorless cameras are not that light weight either

Lets us say the newly launched Canon R5 is 740 gram (mirrorless camera)

The canon 5D mark 4 is 890 gram (DLSR)

So the difference is just 150 grams

Besides we never suggest anyone to buy a full frame camera ever for dental photography irrespective its a DSLR or mirrorless

Lets us consider crop sensor cameras now

EOS M50 is 390 grams (mirrorless)

EOS 1500D is 475 gram (DLSR)

Here the difference is not even 90 grams !

Also note that if you wish to buy a mirrorless camera and use the 100 mm macro lens made for a DSLR you will need an adapter which itself is 110 - 130 grams

So if you actually calculate the mirrorless system with an EF lens becomes equal to or more heavy than the DSLR system.

Apart from focus peaking a mirrorless has no major advantage over a DSLR and even focus peaking is not something to die for. We have been using manual focus since ages and it's not that if one uses focus peaking one will get relatively sharper images. Only the learning curve is smaller however using normal manual focusing without focus peaking is not a rocket science either.

Even a toddler can do it convincingly if taught well for 5 to 10 minutes.

Sure the mirrorless cameras have loads of other advantages but that is for general photography and not for dental photography.

Coming back to this article we will talk about the much awaited Canon RF mount 85 mm macro lens. This lens was announced in July 2020

We were waiting for a macro lens in the mirrorless camera category since long so we could recommend it to our followers and fellow dentists across the globe.

It is not that Canon did not have a macro lens for its mirrorless cameras in the past. The issue was that their focal length was such that it would have caused distortion in images which is to be completely avoided for documentation.

As for Nikon users the wait still continues and there are no signs of any announcements for a macro lens for its mirrorless cameras in this particular focal length zone anytime soon.

DSLR lenses (EF mount) can be used on mirrorless cameras but it needs the use of an adapter to be mounted on the mirrorless camera hence negating the entire purpose of being a light weight system. Also as a dentist we are more concerned about our cases and no one deserves to worry about where the adapter went in case you misplace it! As a dentist we always want simple equipment and we do not want the "adapter headache"

Let us now have a look at some of the specifications the new lens has to offer to us. We will also compare it with the EF mount 100 mm macro lens which is the gold standard for dental photography.

Vital Features in dentistry	Canon RF 85 mm macro f/2 IS	Canon 100 mm f/2.8 macro NON IS
Weight in grams	500	580
Cost in rupees ₹ (as of 26/08/20)	53000	39000
Lens diameter in mm	67	58
Maximum Image Reproduction ratio (Magnification ratio)	1:2	1:1

So we can see that the NEW RF 85 mm macro lens is light in weight and that's the ONLY factor where it wins over the gold standard lens.

Cost wise we can save almost ₹.14000 (Add ₹.10,000 more and you can buy a brand new DSLR camera body in that cost) Clearly the EF 100 mm Canon lens wins here!

Lens diameter of RF 85 mm is 67 which is not conducive to mount Canons own flash lights.

The Canon ring flash and twin flash both have a diameter of 58 mm which exactly corresponds to the filter size of Canon EF 100 mm macro lens. NO guesses here, the Canon EF 100 mm macro wins again.

There is 1 more reason which points to the fact that this lens is more for the general population and not dentists. That reason is this lens has IS or image stabilization. Basically IS is needed when the role of flash is negligible. Dental photography like we always reinforce in all our lectures and articles is essentially flash photography & it does not need any Image stabilization.

RF mount lenses employ a 12-pin connection between the camera and lens for comparison, the EF-mount uses 8 pins. This means faster data transfer, which means lightning-fast autofocus, enhanced image stabilization thanks to better communication between the camera and lens. However none of these characteristics play any role in dental photography.

Lastly perhaps the most important reason why the Canon EF 100 mm macro lens will still be the gold standard lens is the fact that it can reproduce 1:1 magnification ratio which the 85mm RF cannot. Let us uncomplicated this statement by explaining the technical jargons.

If you are an aesthetic dentist and you wish to capture the anterior aesthetic close up image of the case like this:



This simply will not happen while you use the Canon RF 85mm macro lens because it can only reproduce magnification upto 1:2 (0.5) So you will always end up getting more teeth in all your pictures like a full arch image shows many teeth. If you try to go closer to get a more magnified image it will simply not focus because it is not meant for that purpose.

Considering the above points it will be safe to give a verdict that:

The new Canon RF 85 mm macro lens is good for an orthodontist or any other clinician who does not need to take close up images. For an aesthetic dentist or any dentist who does al to of quadrant work in which close up photography is pivotal, this lens is best avoided.

“BUT this lens has 5 stop image stabilization !” You will get to hear this a lot from 2 types of people, Either they are ignorant of what is needed in dental photography or they want to sell the product to you.

Take an informed decision.

Hope you liked this article.

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