

# REALITY

The information source for esthetic dentistry

2018

## The Ratings | CAMERAS

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(4.7)



### RAVES & RANTS

- + Easier to use and lighter than DSLR, but similar resolution
- + Can be disinfected
- 1:1 close-up images require a screw-on lens
- Pricey

### MANUFACTURER

Shofu

[www.shofu.com](http://www.shofu.com)

### PRICE

\$2,995.00

### WARRANTY

1 year

## EyeSpecial C-III

### INTRODUCTION/MANUFACTURER'S CLAIMS

The typical clinical camera consists of a DSLR (digital single-lens reflex) body, a macro lens, and a flash. While these cameras function very well, they tend to be fairly large and somewhat heavy. Then there are modified consumer cameras, which are very small, lightweight, and inexpensive. Plenty to like, especially as a starter camera, but the 1:1 close-up shots don't have the same resolution as a DSLR.

This is where the 12-megapixel EyeSpecial C-III, which succeeds the C-II, comes in. Note: Even though on first glance the C-II and C-III look virtually identical, there are several differences that presumably enhance the performance of the C-III. (We did not have the opportunity to actually compare identical images taken with the C-II and C-III side-by-side.)

- Sensor size: 43mm<sup>2</sup> for the C-III compared to 28mm<sup>2</sup> in the C-II. The larger sensor, in essence, will give you a better image.
- Focal length: 28-300mm for the C-III compared to 50-175mm in the C-II. This wider focal length range makes it easier to focus the image.
- Aperture: f/2.8-f/11.44 in the C-III compared to f/3.4-f/8.6 in the C-II. The wider range will give you sharper images.

### WEIGHT

**1.5lb/0.7kg** This makes it much lighter than a conventional DSLR system, which weighs about 4.0lbs/1.8kg.

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All evaluators except one found its weight to be just right, with the lone holdout thinking it is too heavy.

Some comments:

- No hand fatigue.
- Great.
- Actually very nice balance and weight.
- Who would want it heavier? Compared to my Nikon body with my Medical Nikkor lens, this unit is a joy to use!
- There is no such thing as too light...especially as I'm getting older!
- Without the hand strap, I would actually worry about dropping it on a patient.
- Lighter weight compared to a DSLR.

Along the same lines, its balance and comfort to hold were considered to be better than most DSLRs by most (62.5%) of the evaluators, while the other 37.5% found it to be acceptable. Some comments:

- Handles well with either hand or both. Staff feels weight is ideal. Not too light but nicely balanced for either R or L single hand use.
- Sooooo much more comfortable to shoot with!
- Grips made it easy to hold, but someone with larger hands might have a harder time holding it.
- A little slippery, a rubberized handle will help.

## DESIGN

It looks and even functions like no other camera on the market today. Clad primarily in white plastic with silver-like accents, it is stated to be IPX4. The IP rating determines an item's resistance to environmental insults.

There are three distinct sections of this camera. The back section contains the body, the function buttons, and the 2.8in/7.2cm x 2.2in/5.5cm LCD for capturing/viewing the photos.

The size of the LCD was considered to be acceptable by all evaluators. Some comments:

- Actually, excellent. No such thing as too large. It's large enough to ensure good focus in the photographs.
- It fits right in with the size of the camera and is easy to read.
- The size made it easy to see very clearly.

- Bigger than any DSLR I have tried. I like it!
- Easy to review pictures.

There is also a built-in handle (for right-handers – sorry southpaws) and clips for attaching a leather-like retaining strap.

The middle section is the tubular-like barrel of a lens, which is fixed (not adjustable). There is a royal-blue line bisecting the top that gives you a good point of reference when framing your shots.

The really funky part of the camera is the front section, which looks like a prehistoric bird with its wings extended. The circular center is the lens aperture, which is flanked by four small LED lights, while each of the two wings feature two, vertically oriented point flashes, one small and one relatively large. The entire face is matte black, which is in stark contrast to the white that predominates on the rest of the camera.

The flash design was applauded by most (62.5%) of the evaluators, while the other 37.5% found it to be acceptable. Some comments:

- Fully attached, no wobble or bulkiness to it.
- With two sources (near and far) I get great uniform exposures; especially with mirror shots.
- No concerns. Maybe a couple of times difficult to take occlusal shots of quadrants.

Concerning the illumination provided by the flash, most (62.5%) evaluators found it to be always spot on, while the other 37.5% thought the illumination was acceptable most of the time. Some comments:

- A couple of times, the flash was obstructed and I had to take a shot over (close-up). Otherwise, it was right on the mark!
- As good as the ring flash on my DSLR.
- A little wash out pictures in the full face images. Flash was not powerful enough to prevent the ambient light cast colors.

The left side of the back section has a door covering the slot for the SD memory card, while the four AA batteries can be accessed through the circular door on the bottom of the camera.

From an overall design perspective, most (62.5%)

evaluators really liked it, while the other 37.5% found it to be acceptable. Some comments:

- Very easy to set up and use.
- So simple and easy for staff to use - professional appearance so patients don't just feel you have a cheap point and shoot.
- Ergonomics are very good, lightweight and easy for staff to handle.
- Very different from my Nikon system. At first, I was not sure about it. However, after using it for a while, I did not find it strange at all.
- I have an old Lester Dine setup. This design is amazing!
- At first, it seemed to be overly bulky, but I got used to the size and grip.
- Small and compact compared to DSLR. Easy to store.

## SIZE

All evaluators except one thought it was acceptable, while the lone holdout found it to be too large. Some comments:

- No larger than a DSLR with a macro lens and a ring light.
- Very compact design.
- It appears to be a bit larger than necessary, but not too large to use.
- Smaller than a DSLR.

## USE

It really begins to shine when you turn it on to experience the preprogrammed shooting modes. These include:

**Standard mode** This is the default setting for smile shots. Similar to a 1:2 shot.

**Surgery mode** Similar to Standard, but allows you to shoot from a distance farther away just in case you don't want to get the camera close to the patient. While we understand the sentiment, we predict you won't use this setting very often. Similar to a 1:3 shot.

**Mirror mode** Allows you to reverse the image after it is taken when you are using a mirror for occlusal or buccal shots.

Since it is quite lightweight, it is supposed to be able

to hold it with one hand, the mirror with the other hand, and have the patients use the retractors so one auxiliary can take the photos without needing a second set of hands. Most (62.5%) evaluators were able to handle this chore alone easily, 25% still needed a second staffer to hold the mirror, and 12.5% could accomplish this maneuver but not easily. Some comments:

- I can't do that with my DSLR -- it is too heavy.
- One-handed use is easy!
- As a matter of fact, I did! This is impossible with my DSLR system, especially with high magnifications. However, I still prefer to use an assistant to hold/retract.
- I did not find it to be THAT lightweight.
- Patient holds the retractors. The assistant the mirror and air water syringe. I take the pics.

**Face mode** For head and shoulders shots. When this is activated, there is a yellow UP arrow showing you how to hold the camera vertically to capture this image.

**Low-glare mode** Presumably helps when shooting anterior teeth and models. Most (80%) evaluators found less glare, but noted it was a very minimal difference. One evaluator found the differences more visible if your target is shiny or glossy.

**Whitening mode** Supposed to be used to compare shades before and after bleaching. It is stated to be similar to the low-glare mode, but with lower light intensity, which presumably "emphasizes the surface texture and shade." We're not sure why you need to emphasize surface texture in before and after bleach shots, but in any event, most (80%) evaluators could not tell much of a difference between it and Standard.

**Tele-macro mode** For 1:1 close-ups, but you also need to mount the auxiliary close-up lens, which attaches to the built-in lens via a screw-like mechanism. While attaching this lens is not difficult, it can be a nuisance to have to stop taking photos, screw on the lens, and then start again.

Most (62.5%) evaluators preferred having a single lens, but didn't feel it was a deal killer, 25% didn't take 1:1 close-ups on a regular basis, so having the

extra lens was not a big deal, and 12.5% really preferred a single lens. Some comments:

- Understandable inconvenience for the resultant quality and magnification
- I also have to change settings on my DSLR.
- This is a small price to pay for its compact size. Screwing on the extra lens is an extremely small price to pay for all its other features. Besides, when I am shooting a close-up series, I just put it on and go! Not like I have to take it on and off a dozen times.
- I don't need to take those close ups that often where it was an issue. Sure, it would have been better to not have to screw on the lens, but I did not see it as a big deal on the rare occasion I did.
- There were a few times I didn't use it due to the hassle of screwing on the close-up lens, but I used it mostly for portraits.
- Standard mode is ok for me. I really never needed a 1:1 image.

The resolution of the resulting images was considered to be about the same as a DSLR by most (62.5%) evaluators, 25% still thought DSLRs were better, and 12.5% found the C-III to be superior.

Some comments:

- I could not tell a lot of difference.
- It's good and certainly acceptable, but I'd still give the nod to my Canon.
- C-III in my opinion is equal to all the rest.
- After some time to get used to it, I did not see an appreciable difference.
- Clarity better in DSLR but for our applications, the quality was good enough.

**Isolate shade mode** Two images are created from one shot. The first image is taken in low-glare mode. The second image captures "natural" tooth color while de-emphasizing the background. All evaluators except one found this mode to be somewhat useful at least occasionally. One evaluator noted it was very valuable and another stated that his lab thought it was beneficial.

You can also change the magnification ratio and focus distance. There is even an auto-cropping function and you can draw on the captured images.

Overall, most (62.5%) evaluators used all the modes, but still found the Standard mode most useful, while 25% used all modes routinely and 12.5% used some of them, but primarily Standard. Some comments:

- Standard was used mostly, and the color match setting was second and found to be useful by my labs.
- Not all, but several. Standard, Mirror, Face, Tele, Isolate Shade. All are useful and practical for my needs.
- I used Standard and Mirror (for ortho photos) most of the time. I also used Face. I saw no need for Surgery, Low-glare, Whitening or Isolate shade.

To use, you rotate the power dial on the top of the right side of the body, immediately above the built-in grip. This action illuminates the LCD. You then push the F1 button, which is the first of four, vertically-oriented functions on the left side of the LCD. By pushing this button twice, all of the modes appear on the LCD. Use the touch screen with your finger or the supplied stylus or rotate the silver-like dial immediately behind the shutter button, which is in the middle of the power dial, to select your mode. Then frame your shot on the screen and click the shutter button. Simple, easy, quick.

Most (75%) evaluators found changing modes to be easy, 12.5% acceptable, and 12.5% complicated.

But be aware that there are numerous additional capturing and editing functions that are at your disposal, so to take full advantage of this camera's potential, you should be prepared to spend an hour or so with your staff discovering its pearls.

The learning curve was considered to be acceptable by all evaluators except one, with the lone holdout finding it to be steep. Some comments:

- The video online helps.
- It did take a while to review instructions and easily remember all of the features.
- Very little curve. Very easy to operate.
- Only compared to decades of using a DSLR system. After a while, it is somewhat intuitive. If you used C-III for decades and along comes a DSLR system, it would be difficult to adjust to it!

- Not bad, but then again if someone has been taking photos for a while, it wouldn't be. For someone new, it might take more time, but the curve would not be steep.
- Even my assistants used it with ease.
- Easier than a DSLR. Anybody can use this.
- The optical touch screen makes all the difference in the world.
- Focusing was tricky/slow at times, but it was usually straightforward.
- I allowed some students to use it and they commented that it was much easier than the DSLRs we have.

The shutter button was considered to be easy to locate by all evaluators except one, with the lone holdout finding it was difficult to reach and locate. One evaluator thought it was easy to reach, but difficult to focus.

## DISINFECTION

The aforementioned IPX4 rating means the EyeSpecial C-III should not be affected by wiping it with a disinfectant. That chore is virtually impossible with a more conventional DSLR camera. As a matter of fact, you could void a conventional camera's warranty if you try to disinfect it. However, the IPX4 rating also means you cannot totally immerse it in disinfectant.

This ability to be able to disinfect the camera was considered to be very important by all evaluators except one, with the lone holdout stating his office only handled their regular camera with clean hands or gloves. Some comments:

- Great benefit.
- Also gives better appearance of cleanliness to patients because it is specially constructed for this purpose.
- Much easier to clean than a DSLR and this is a big, big, selling point.
- Of course! You would trash a DSLR system with all the chemicals you would expose it to. Smart design for the C-III.
- This is a big deal!
- I LOVED this feature!
- No, it is not a big deal. Wiping may void the

warranty, but I have not had any problems. I like the slick surface as it makes it easy to disinfect.

## DIRECTIONS

43-page, plain paper manual with numerous black and white illustrations. There is also a plastic-coated, double-sided, quick reference sheet with numerous color photos and illustrations. Some comments:

- I would also suggest online video is helpful.
- This is a lot of material to digest and learn, but it was not of any concern. It is to be expected to have these features and this quality - clinicians need to write instructions for staff to acquire all required photos for clinical cases - plus individual areas of interest. A check off sheet for staff works great.
- Pretty clear and needs to be read in order to operate the camera to its fullest potential.
- It was much easier to get started quicker if a skilled representative shows you how to negotiate through the camera. The printed directions are accurate, but it would have taken me more time to get up to speed by just using the printed directions.
- Thorough manual and PowerPoint on the flash drive enclosed. Very well written with nice images.
- Grammatical/spelling errors in PowerPoint. The directions were easy to follow, but not always accurate (claims it won't take photo if not in focus, but this wasn't always true.)
- I like that the directions pop up every time you turn the camera on. Easy to follow.

# REALITY

**STRENGTHS** Lightweight. Easy to handle, use, and disinfect. Near DSLR capability with ease of use of a point and shoot. Can be used unassisted by dental assistant. Great resolution. Easy to focus and shoot. Excellent shade reproduction. Unique design and quality construction. SD card fits most slim notebook computers. It is easier for novices to use than a DSLR. It has greater depth of field than some lenses. Learning curve not as steep as DSLR. Everybody in the office can use it. Small size makes it easy to store.

**WEAKNESSES** 1:1 lens change. Durability unproven. SD card door is difficult to open. Display may be slightly busy, displaying too much data. Sometimes, the image looks out of focus in the display, but once the image is captured, it is clear. Doesn't always focus quickly. It is somewhat slow to boot up. The lag in shutter speed makes it hard to capture a fast-moving object (like a baby's tongue). Draw/edit mode can be cumbersome. Pricey.

## BOTTOM LINE

**If shooting close-ups is the exception rather than the rule for your practice, the C-III simplifies clinical photography and can exceed the functionality of conventional DSLRs.**

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