Why the SHOFU EyeSpecial C-V is an excellent choice for dental photography



Daan van Oort
MDT, Professional Photographer, Dental Photography Specialist, Oosterbeek, Netherlands

Nowadays photography in dentistry is no longer an afterthought. Images capture details that are sometimes imperceptible to the naked eye; they enhance communication with the dental laboratory and provide insight into treatment progress. As such, photography is an essential component of meticulous work practices.

In essence, I see roughly three feasible options. The mobile phone: always at hand, accessible and reliable. The system camera with macro lens and ring flash or macro twin flash: leaves little to be desired from a photographic standpoint but is demanding in terms of knowledge, weight and maintenance. And a camera specifically developed for dentistry, such as the SHOFU EyeSpecial C-V (Fig. 1). In this article I explain why the third option is the smartest choice for most dental practices.

Image quality in the mouth

A smartphone effortlessly takes nice pictures in everyday situations, but the oral cavity is not an everyday environment. It is a small, dark space with damp surfaces that reflect light in unpredictable ways. The software in a phone tries to make the image look appealing, but in dentistry 'appealing' is not the same as 'correct'. Colours shift, exposure changes for each shot and the possibility of managing reflections is virtually entirely lacking.

At the other extreme is the system camera with macro lens and ring flash or macro twin flash. From a photographic perspective such a setup yields excellent results: reliable colour rendering, precisely adjustable depth of field and good exposure control. But you need to have an understanding of aperture, shutter speed, ISO value, flash ratio and white balance. This is not a problem for an experienced photographer, but for a dentist or dental assistant who needs to take a quick picture between tasks it can present quite an obstacle.



Fig. 1 SHOFU EyeSpecial C-V with ring flash and two 45° flashes



Fig. 2 Cross polarizer filter with macro lens



Fig. 3 Front teeth without cross polarizer



Fig. 4 Front teeth with cross polarizer

The SHOFU EyeSpecial C-V is positioned precisely in between these two worlds. The camera has a 12-megapixel sensor in combination with the FlashMatic system: a ring flash or the two 45° flashes ensure even exposure without hard shadows. The result is consistent, realistic colour rendering. Moreover, you can use the cross polarizer to eliminate reflected glare and render visible the internal colour composition (Fig. 2, 3 and 4). With a phone this is only possible with additional LED lights and a mount, and with a system camera you can only achieve this with a separately purchased polarisation filter and the associated knowledge.



Fig. 5 The SHOFU Eyespecial C-V with nine preset shooting modes

Harmony in the workflow

The EyeSpecial-C-V has nine preset shooting modes (Fig. 5), tailored to the daily dental practice. Intraoral photography, mirror photography, portrait shots, shade matching and close-ups with the macro lens: the camera is correctly configured for every situation with just one push of a button. You select the mode, set the magnification factor, position the camera at the correct distance and press.

With a smartphone you always have to make decisions about exposure, focus, distance and white balance yourself. With a system camera the challenge is even greater: manual settings that can differ per situation. Those who have mastered the technique can produce stunning images. But in a busy practice, where multiple people use the camera, there is a real chance of incorrect settings and inconsistent results. The EyeSpecial C-V eliminates this problem. Taking photos is easy to delegate to an assistant, after brief training. This ensures harmony in the workflow and yields reproducible results within the entire team.

Ergonomics and weight

At around 590 grams, the EyeSpecial C-V is sufficiently lightweight to hold it comfortably with one hand, while handling a cheek retractor or mirror with the other hand. A system camera with macro lens and ring flash easily weighs a kilo and a half. This is a heft you're sure to notice when taking multiple consecutive images, especially with one hand. Fatigue in the hand and wrist due to a heavy configuration should not be underestimated. A phone is lighter but does not offer the grip and stability you need for precise intraoral images.

Privacy and the GDPR

Medical photos are classified as special category personal data and must be carefully processed and saved according to the GDPR. When using a smartphone, images are saved in a personal device that is often connected to a cloud service such as iCloud or Google Photos. Automatic synchronisation lies in wait and the dental practice loses control of where the patient data ends up. Loss or theft increases this risk.

A system camera does better on this front because there is typically no cloud connection. But there is a lack of a structured system for linking the images to patient numbers. Photos are stored on a memory card and then need to be manually sorted and uploaded.

The EyeSpecial C-V offers a substantially safer alternative. The camera works as a closed system. Images are saved on an SD card and transferred to the SureFile software on the practice's computer through a secure WiFi connection and automatically sorted by patient number. No cloud, no social media, no unwanted synchronisation. For those who wish to work in compliance with the GDPR, this is a significant advantage.

Hygiene in the clinical environment

The EyeSpecial C-V has an entirely smooth surface without joints or openings where dirt could accumulate. The camera is water-resistant according to the IPX4 standard and can be quickly disinfected with an ethanol spray (Fig. 6).

Disinfecting a phone is more difficult due to openings for speakers, microphones and charging ports. A system camera with macro lens and ring flash is even more problematic. This is due to the many angles and joints of the flash, the texture of the handle and the numerous buttons and wheels. Thoroughly disinfecting such a setup costs more time and is more difficult to execute reliably.



Fig. 6 The camera can be disinfected with disinfectant wipes

Professional appearance

A smartphone can raise questions about privacy among patients. A large system camera with flash can appear intimidating in the setting of a dentist's chair. The EyeSpecial C-V falls exactly in between the above two options: recognisable as a professional tool but compact and non-threatening. It makes clear that photography is an integral part of the treatment process, without patients feeling like they're sitting in a photo studio.

Conclusion

The smartphone is too limited for reliable dental photography. The system camera with macro lens and flash produces photographically excellent results but demands technical knowledge and is heavy, cumbersome to disinfect and difficult to delegate.

The SHOFU EyeSpecial C-V combines professional image quality with an ease of use that makes a difference in daily work tasks at the dental practice. Consistent results, easy handling, GDPR-compliant data processing and a hygienic design make it a logical choice for practices that are committed to using dental photography for their diagnostics, communication and documentation. ◆

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