

Nikon D800 modified for UV-VIS-IR ph

Cameras for Technical
Photography - Cultural
Heritage Science Open
Source

Nikon D800

Cameras for Technical Photography - Cultural Heritage Science Open Source

We have cameras ready for Technical Photography (TP) (UV-VIS-IR) plus free color calibration and Spectral Range Test with TP filters set [Robertina](#).

Color Calibration

Due to differences in technologies and variables in manufacturing processes every camera captures colors a bit differently. Even two identical cameras from the same company are a bit different. Even if the Raw processing software you are using could have included a profile for the model camera which you use, you can get even better results when you create a profile specifically for the RAW output of your specific camera.

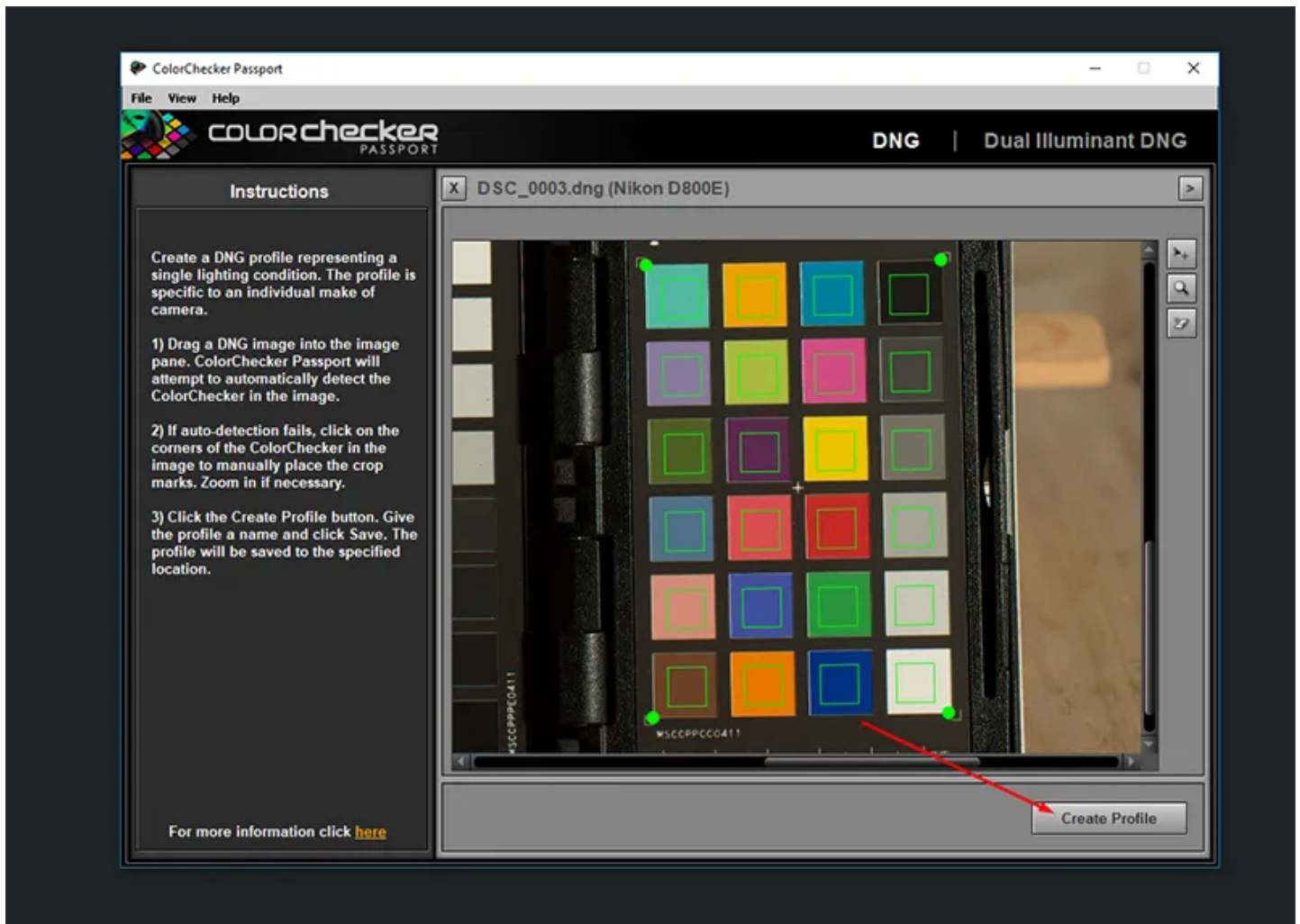
We do color calibrate each full spectrum camera that we deliver. Color accuracy is pivotal in art documentation, especially when it comes to paintings. We use the X-rite ColorChecker Passport and its bundled software. ColorChecker Passport Classic Target is the industry standard color reference target for creating DNG profiles and for evaluating specific colors. [Read more](#) about color calibration for DSLR cameras.

Cameras for Technical Photography - Cultural Heritage Science Open Source



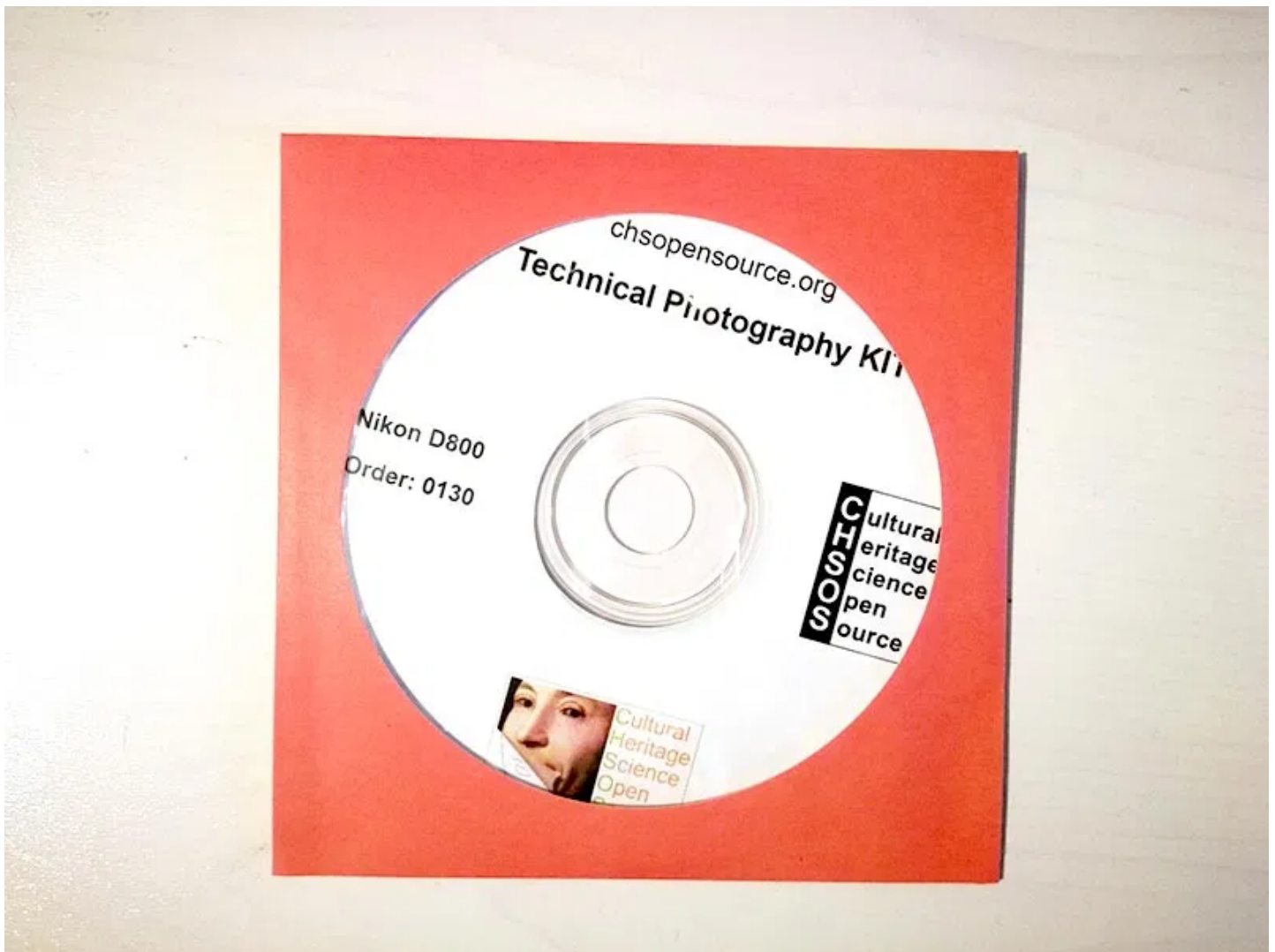
CHSOS Studio. Each full spectrum camera is color calibrated with our specific VIS filter.

Cameras for Technical Photography - Cultural Heritage Science Open Source



We use the X-rite ColorChecker Passport and its bundled software to prepare a color profile for each of our full spectrum modified cameras.

Cameras for Technical Photography - Cultural Heritage Science Open Source



Each camera comes with a disk containing the color calibration profile for the specific camera and the results of the test for UV, VIS and IR photography.

Spectral Range Test

Before we ship each camera we test it with the [Robertina](#) filters set for Technical Photography. The camera shoots a VIS image of [Pigments Checker](#) and we can evaluate how the color profile is performing. Then we shoot a [UVR](#) photo where [titanium white](#) and [zinc white](#) are supposed to appear black while [lead white](#) is bright. Eventually, the test photo for [IR](#) shows how [smalt](#) has become totally transparent.

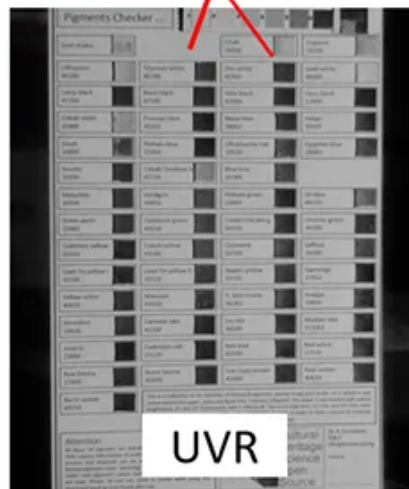
Cameras for Technical Photography - Cultural Heritage Science Open Source

Spectral Range Test

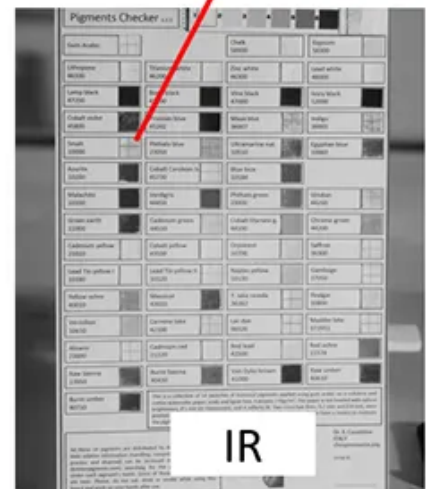
Color calibration with our VIS filter is successful



Titanium white and zinc white must be black



Small becomes transparent



We test each modified camera to evaluate how it performs in each spectral range, UV, VIS, and IR.

Nikon D800

The 36 MP Nikon camera, the largest number of pixels so far available from Nikon.

Cameras for Technical Photography - Cultural Heritage Science Open Source



Do you really need a modified UV-VIS-IR camera?

We made the test. We shot our [pigments checker](#) with a [Nikon D800](#) without any modification, such as one camera that you can buy in any shop. Then we shot with our [Nikon D800](#) modified for UV-VIS photography. We kept the same conditions (aperture, shutter speed, UV and IR radiation intensity, distance camera – subject).

Cameras for Technical Photography - Cultural Heritage Science Open Source

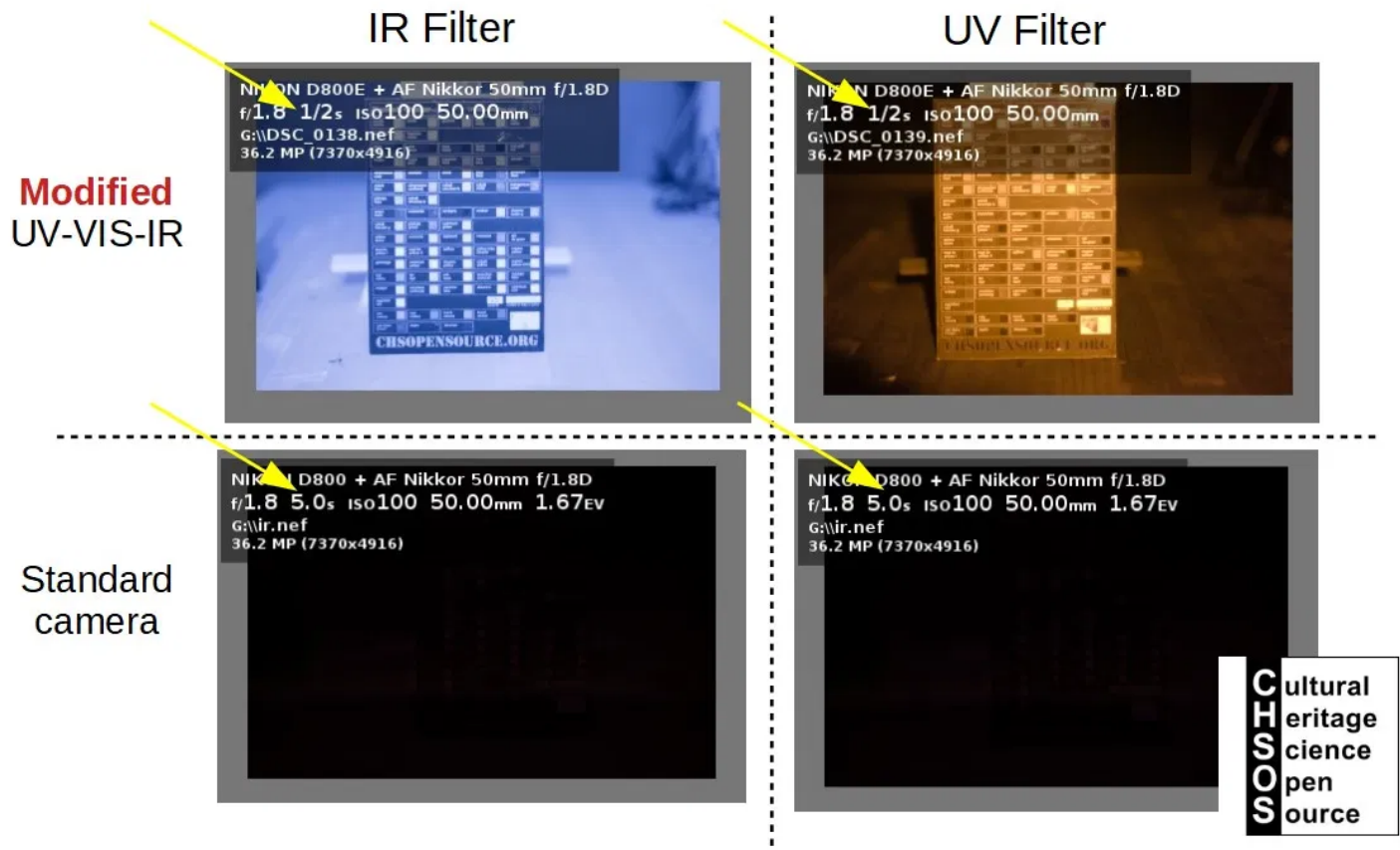


We tested a standard [Nikon D800](#) and our [Nikon D800](#) modified for UV-VIS-IR.

We started the test with our [Nikon D800](#) modified. We used an exposure of 1/2 second for both the [IR](#) and UV images. Then we tested the standard camera and we got just dark images.

We increased the exposure up to **5 seconds** and the result was the same, just dark images.

Cameras for Technical Photography - Cultural Heritage Science Open Source



Let's compare what happens when we use our UV and IR filters on a camera modified for UV-VIS-IR and the same model without modification.