Miles Research Iris Cameras – Economy Models

Jon Miles, *January 2018*

How to Select an Iris Camera

Miles Research offers a range of iris cameras that are designed for maximum image quality, with superior illumination, versatility, and ease of use. As the owner and developer, Jon Miles has been designing eye cameras since 1981, initially for ophthalmology research at University of Michigan. During the last 25 years in southern California, the iris camera and illuminators have been perfected to a high degree.

It is best to select a high-resolution iris camera that is modular and can be used for many imaging subjects, not just the iris.

The camera systems are presently based on the 24 megapixel Nikon DSLRs and use the Nikon macro lens. The illuminators can be adapted to work with most any type of DSLR but Nikon is the preferred choice.

Three economy models are available. These use simplified illuminators that can always be upgraded to more advanced models.

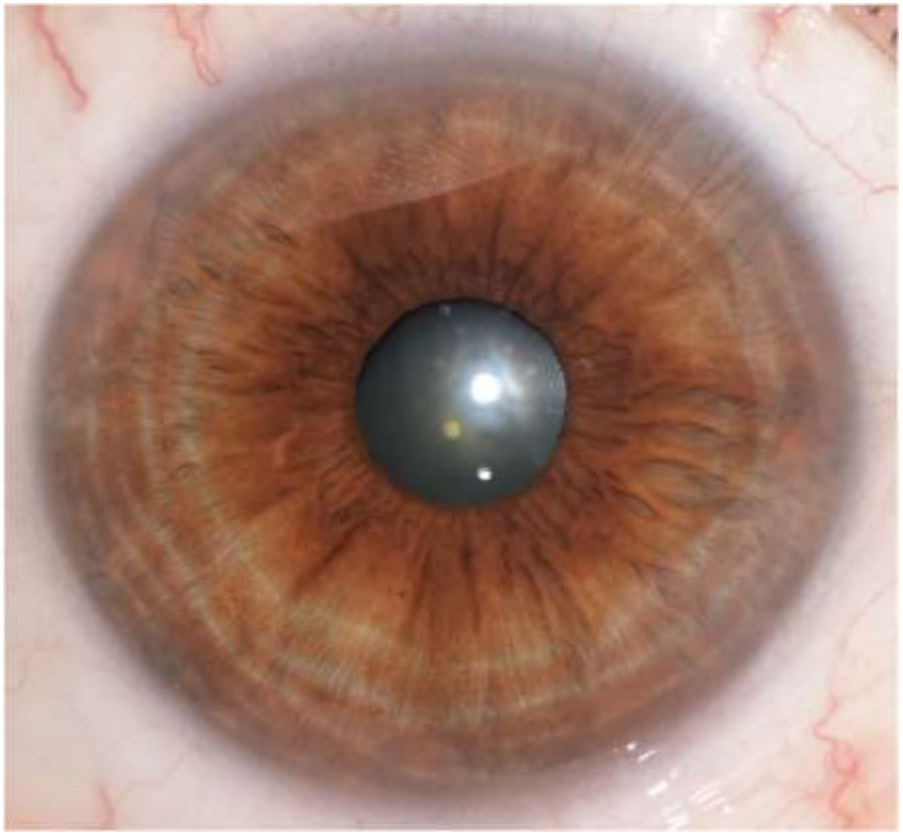
The **Single Central Lighting** model (**SCL**) is available for $2300; with the soft-case option, the price is $2200. A soft-case version with macro lens only (no zoom lens) is $2150.

SCL (Single Central Lighting) - $2300

This is the simple, easy-to-use central lighting camera. It is ideal for both human and animal iris imaging. The light is positioned at 13 degrees from the axis to avoid shadows and other artifacts, and to keep the reflection off cornea in the pupil area.

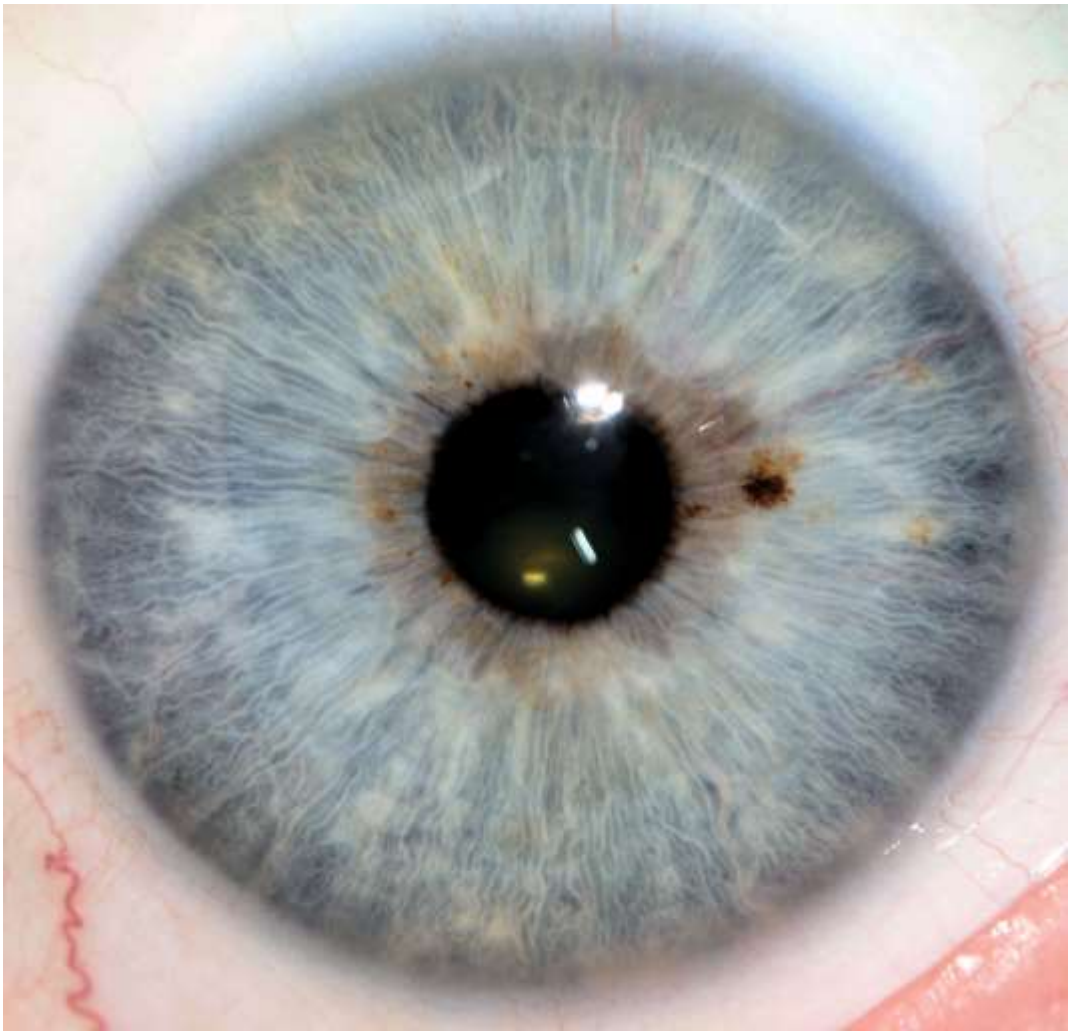
Sample photos using the SCL Illuminator:

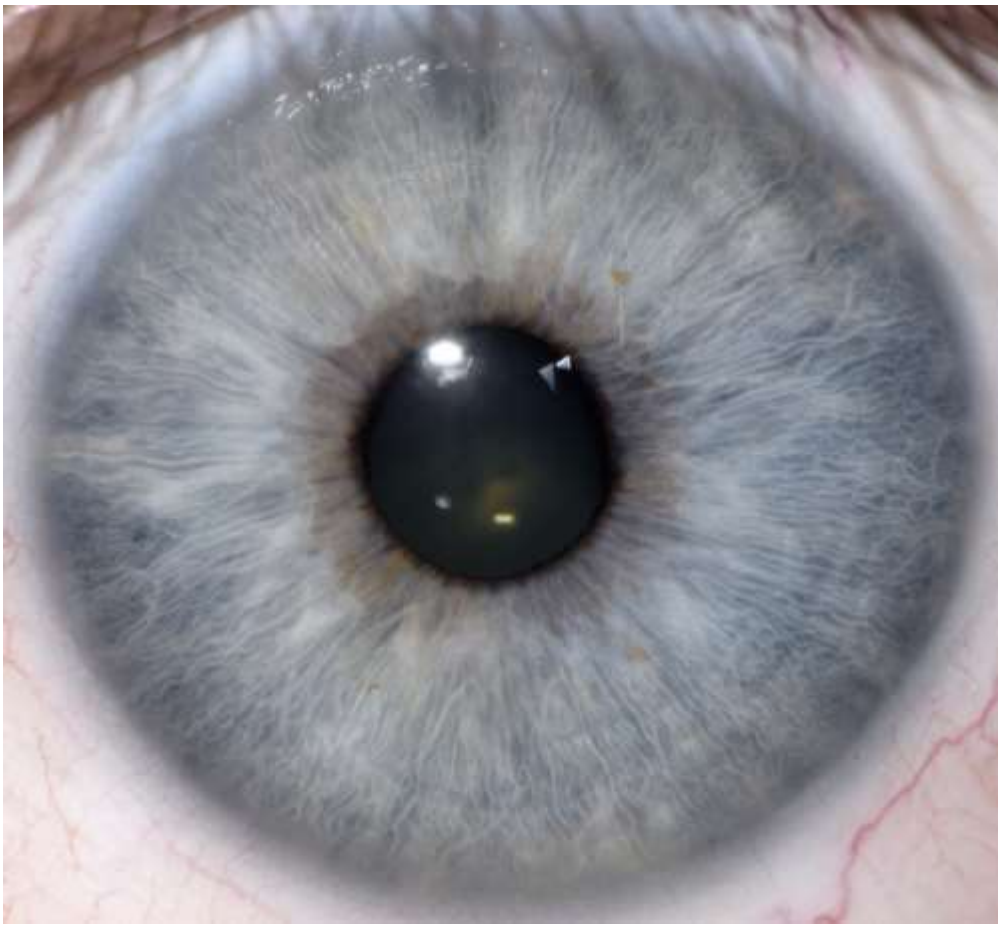
With the SCL Illuminator, the reflection is always in the pupil area.



The **Direct Flash Lighting (DFL-2)** model includes the soft case and macro lens only for $1700.

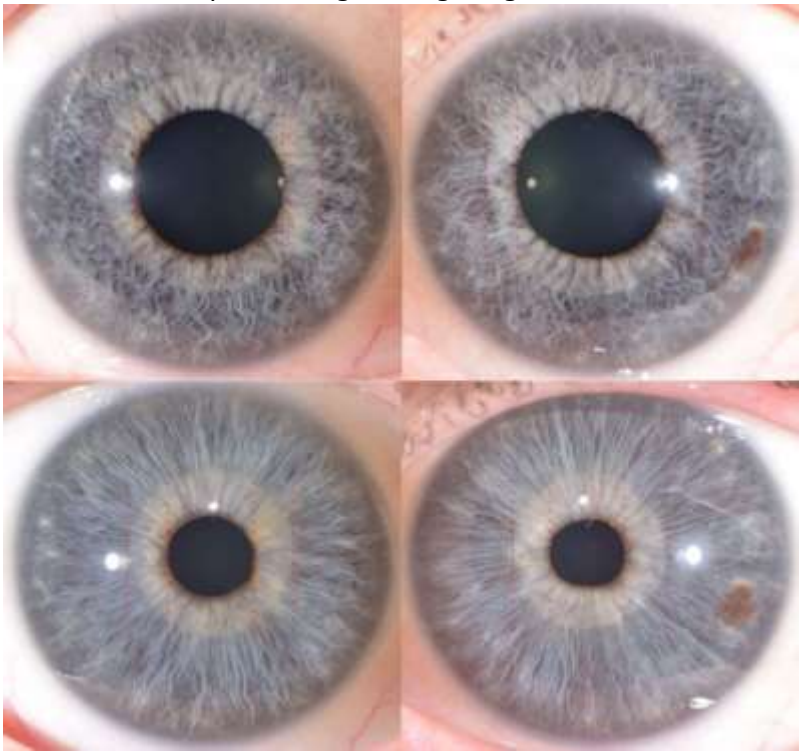
Sample Iris Photos using the DFL illuminator:





These two models include the new **Integrated Adjustable-Brightness LED Focus Light** (IAB-LFL). The brightness of the LED focus light can be adjusted to control pupil size and for maximum client comfort. Appearance of both iris color and texture is affected by pupil size and some types of imaging protocol (e.g. IPB imaging) can best be done with either a large pupil or small pupil. This focus light is designed to allow the brightness to go to zero right before taking the focused photograph. This focus light can be powered by AC, DC, or USB cord (included).

Example of effect of focus light brightness on apparent iris color and texture:
Note: This example is using side-lighting.



In this example, the same iris was photographed with the focus light on (bottom pair) and then with the focus light switched off (top pair). Various textural features are easier to identify when the pupil is large, while color features (pigment deposits) are more visible with the smaller pupil.

The **Direct Flash Lighting (DFL-1)** model includes the soft case and macro lens only for $1500.

The DFL-1 (Direct Flash Lighting, model 1) – is the new super economy iris camera. This is a kit that includes the same pro 24-megapixel Nikon camera and 85mm macro lens, but with a simplified hood-mount illuminator for Direct Flash Lighting of the iris. The twin focus lights have two brightness settings and allow for precise focusing of the camera on the iris surface. This camera, as with all Miles Research Iris cameras, can be used in handheld mode or with a chinrest. This super-economy iris camera kit includes a soft carry case, spare camera battery, and a USB cord. The camera supports wireless link to computer or smartphone using wi-fi or Bluetooth.

Links to More Information

Setup Videos and User Guides

How to set up and use the Single Central Lighting Iris Camera (MEC-SCL)
https://www.youtube.com/watch?v=bBb7N2r4odA

This video shows how the Single Central Lighting (SCL) iris camera works. This camera is simple to operate and the illuminator reflection is always in the pupil area.
User Guide for SCL: http://www.milesresearch.com/pdf/Quick-Setup-Guide-for-MEC-5-SCL-D3200-N85.pdf
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How to set up the Direct Flash Lighting Iris Camera (MEC-DFL-E)
https://youtu.be/jstd5K6JP2A

This video shows the economy iris camera model MEC-DFL-E which includes a Direct Flash Lighting illuminator with adjustable-brightness focus light, in a compact (8"x7"x6") soft carry case, all for $1700 from www.milesresearch.com . This package includes the 24 megapixel D3200 and the Nikon 85mm macro lens. This video also shows how to take iris selfies (iris photos of your own eyes) and play them back & zoom in, using the camera.
User Guide for DFL: http://www.milesresearch.com/pdf/Quick-Setup-Guide-for-MEC-5-DFL-D5200-N85.pdf
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Summary

The Economy Miles Eye Camera system (MEC) prices
(each kit includes a 24-megapixel Nikon camera, a macro lens, illuminator with lifetime warranty, accessories and a carry case)

MEC-D3400-N85-SCL	$2300
MEC-D3400-N85-SCL-S (softcase option)	$2200
MEC-D3400-N85- SCL-S2 (softcase, single-lens)	$2150
MEC-D3400-N85-DFL-2 (softcase, single lens)	$1700
MEC-D3400-N85-DFL-1 (softcase, single lens) ← ***most economical***	$1500

For more info:

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Note: Most illuminators can also be made for the Nikon 105mm VR lens and the Canon 100mm macro lens.

For Partial Kits (if you already have a camera and/or lens):
For a *Lens-Illuminator Kit* (**LIK**: no camera body included), deduct $550 from the Camera Kit price. For an *Illuminator-Only Kit* (**IOK**: no camera or macro lens included), deduct $1100 from the Camera Kit price.