

Miles Research Macro Camera MC-2 (10 megapixel)

A professional digital camera for precise imaging of the iris and sclera.

Standard: 10 megapixel Nikon Camera with Nikon 105mm macro lens.

Note: Illuminator-lens kits are available for most makes of DSLR camera-lens.

CB Illuminator available for Sigma 105mm 1:1, SL & FL Illuminators available for Tamron 90mm 1:1

Now available in three models:

CB: Coaxial Biometric illuminator



MC-2-CB

Coaxial Biometric Illuminator

This model is the original standard for reference biometric imaging, providing uniform shadow-free iris images due to coaxial illumination. This is the simplest, most compact illuminator with highest value. Produces images with maximum uniformity of illumination.

SL: Dual Side-Lighting illuminator



MC-2-SL

Dual Side-Lighting Illuminator

This model offers side-lighting for more apparent “depth,” due to shadow-casting via 45-degree illumination. The illuminator can switch between right, left, or both channels open, via a shutter paddle. Illumination system is entirely mounted on the lens hood.

FL: Research Flex-Lighting illuminator:



MC-2-FL

Research Flex-Lighting Illuminator

This model offers adjustable side-lighting for specialized study of the iris and inner pupil border. The output end of each lightguide can be set to any angle up to 90 degrees, and any distance. The illuminator can switch between right, left, or both channels open, via a shutter paddle. Illumination system is entirely mounted on the lens hood.

Models **CB** (left) and **SL** (right):



Features

- Premium Nikon digital SLR with interchangeable Nikkor macro lens
- MEC-2-CB: 10-megapixel images (3872x2592)
- MEC-4-CB: 12-megapixel images (4288x2848) – **Based on Nikon D90 (NEW!)**
- Compact, Portable; Handheld operation with optional chinrest available
- Bright viewfinder image allows for easy focusing
- Flash illumination is guided precisely to the eye via fiberoptic lightguide
- All pictures are illuminated via onboard pop-up flash and lightguide
- Model **CB**: Ideal for **biometric** applications (measurement of iris color and texture)
- Model **SL**: Ideal for **depth imaging**; light can be switched to both channels ON for “flatness”
- Optics are optimized for iris photography
- Useful for accurate imaging of the iris, sclera or any ½” diameter object
- Can take pictures, print them out, or play them back – all without a computer
- Accepts SD Flash
- Can use the camera for other photography by mounting a different lens (Nikon mount)
NEW! – use this camera for general photography!

Includes

- Digital Nikon SLR camera with Nikon 105 mm macro lens
- SL and FL illuminators are also available with the Tamron 90mm lens (\$300 less than with Nikon lens)
- Nikon 18-55mm VR AF-S Zoom lens: **FREE! zoom lens for general photography! (MC-2 only)**
- Custom iris illumination system
- 2 GB 150X high-speed SD Flash card
- High-speed USB 2.0 SD card reader (accepts most flash memory card formats)
- USB cord for direct computer link
- Two camera batteries
- Nikon Camera battery charger (120-240 VAC)
- Airtight, watertight carry case (17” x 14” x 8”);
- Weight is 15 lbs with all components included.
- Nikon Picture Project image edit/organize software

Options

- Nikon Camera Control image capture software (add \$180)
- Iridology Workstation 5.0 analysis software (add \$450)
- Chinrest with focusing knobs, remote trigger, and capture program (\$900 with camera)
- Power Table (\$800)





The camera offers easy-to-use handheld operation; Airtight, watertight, foam-lined carry case with all accessories



How to Order:

Please contact your local reseller:

Send inquiries to:

Miles Research
141 E 13th Ave
Escondido, CA 92025-5802
 760-746-7415 / 760-746-7416 fax
jon@milesresearch.com
www.milesresearch.com

The primary benefit of the coaxial biometric model (CB) is that it produces images with great uniformity of illumination. The camera is also sleek and compact, and does not require changing anything between taking the right and the left iris photos.

The standard Side-Lighting model (SL) has the lightguides that are carrying the flash output in a standard optimized position on each side in the horizontal plane of the axis and directing the light at 45 degrees from the lens axis; most iris imaging does not need or benefit from variations in the illumination. The SL model can produce images with some shadow for depth information, and can also produce "flat" images (more uniformly illuminated) by having light coming in from both sides at the same time.

The Research Flex-Lighting illuminator (FL) is designed for those who want to explore a variety of illumination angles and is not intended for routine clinical use, however it can certainly serve this purpose well.

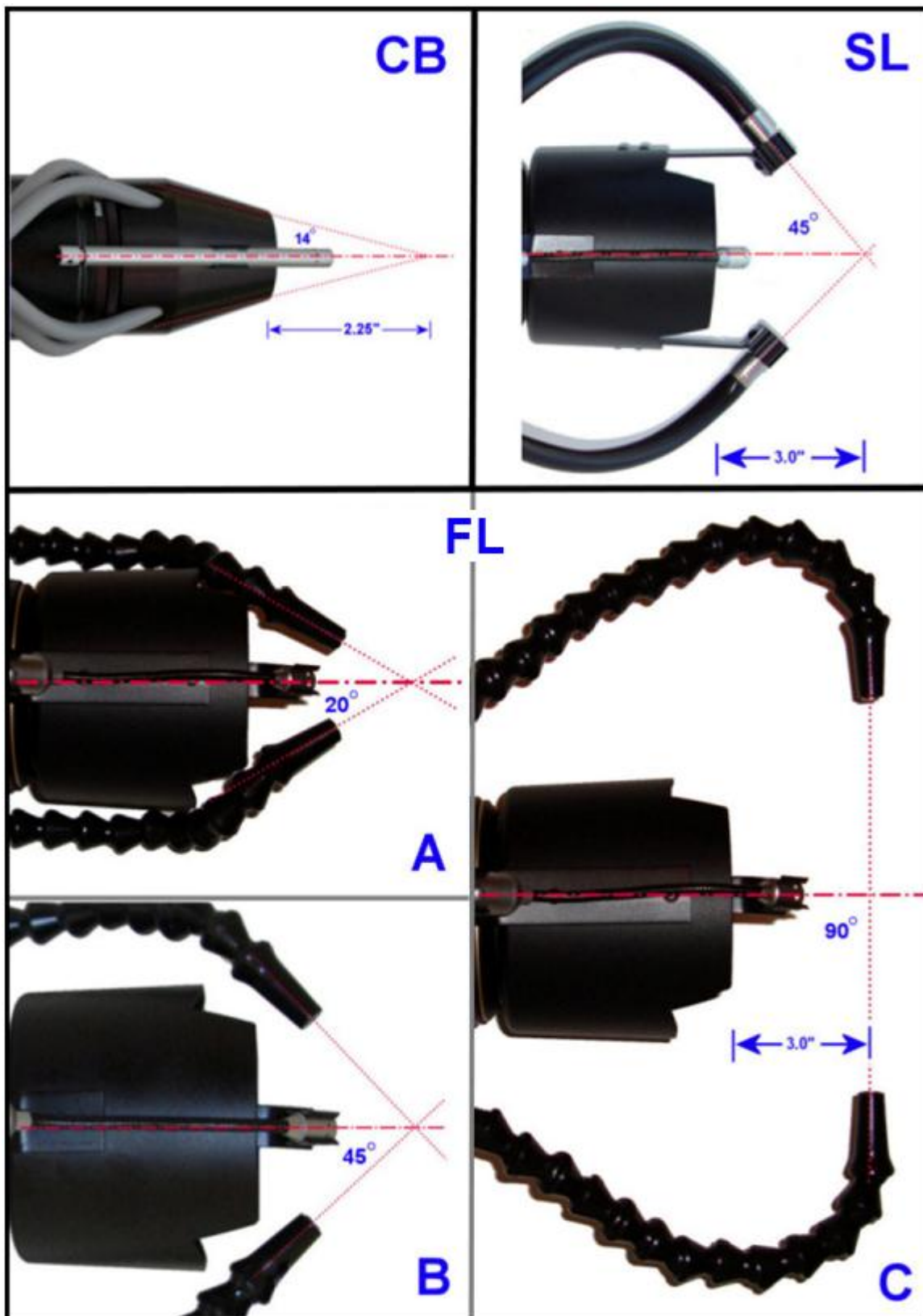


Diagram illustrating the different illumination angles for the 3 types of illuminators:

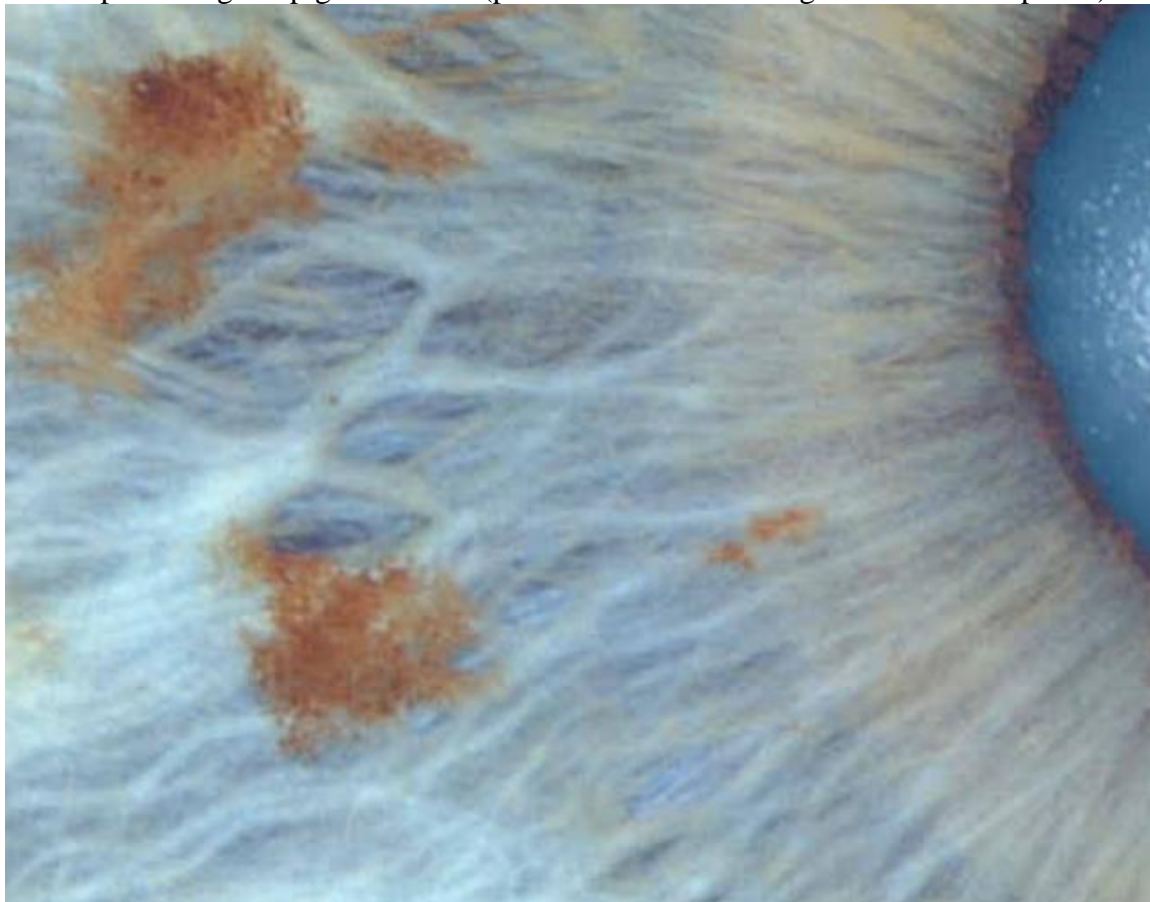
CB: Coaxial Biometric – for maximum uniformity of illumination – All images have 4 reflection dots near the center

SL: Side-Lighting – for imaging shadow-emphasized depth features – All images have 1 or 2 reflection dots.

FL: Flex-Lighting – placing the flash output at any position or angle

Note: All illuminators are optimized for 1:1 imaging.

Close-up showing iris pigment detail (portion of a full iris image at 3872x2592 pixels):



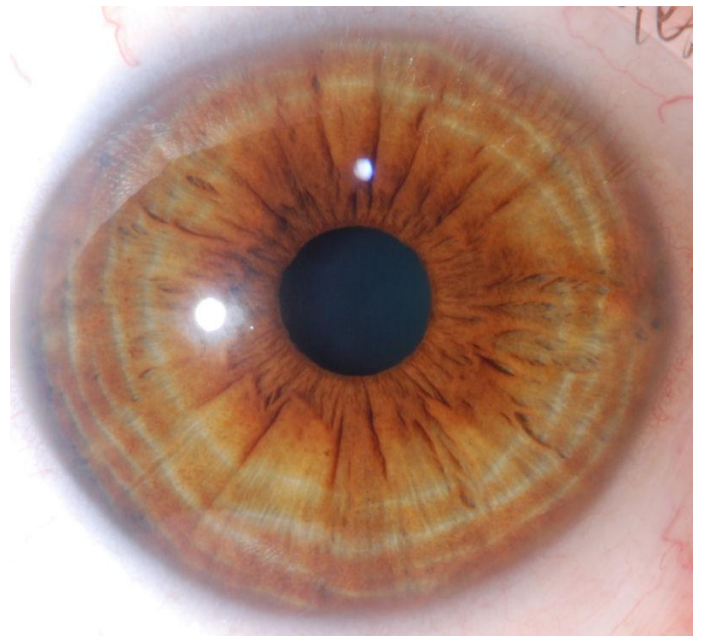
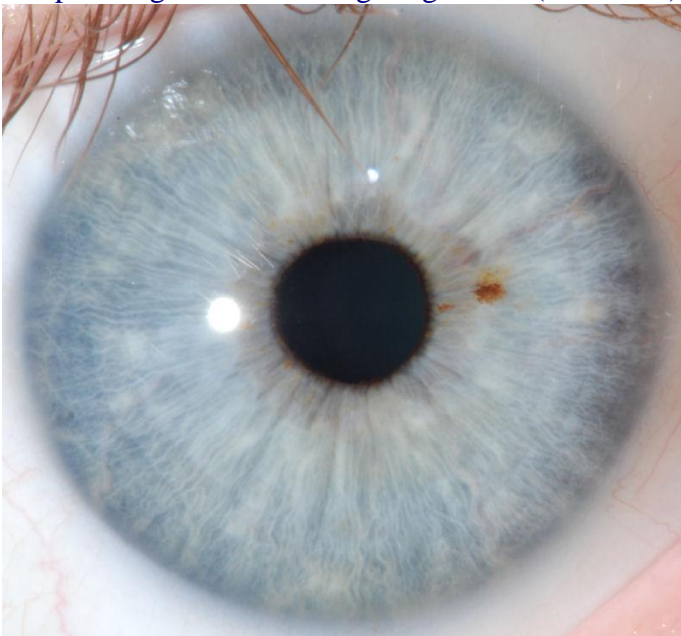
Close up of sample blue iris image, showing fiber detail near collarette:



Close up of sample brown iris image, showing collarette detail:



Sample images from Side-lighting model (MC-2-SL):



Close-up view of the lightguide shutter in 4 positions:



