



# CHEAPEST PRINTS



**LEICA M8**
*in-depth  
review*


◀ 1. Introduction ▶

## Leica M8 Review, July 2007, Phil Askey



### Review based on a production Leica M8

In 1954, at Photokina (or 'Foto Kina'), Leica introduced the first M series camera, the M3, the first Leica rangefinder body with a bayonet interchangeable lens mount, it was the beginning of a legendary series of cameras and lenses, the latest of which, the M7 is one of the only 35 mm rangefinder cameras still in production. For over half a century Leica has resisted the temptation to change the essential simple design established with the original M3 (it wasn't until 2002 that an electronically-controlled shutter was introduced allowing aperture priority automatic exposure). With an average 10 years between major upgrades and many of the original M3s still in regular use, the M platform is felt by its legion of fans to be the purest photographic tool available, and a welcome antidote to the mass of plastic feature-laden models that make up the rest of the market. Owning a Leica M camera has always been something people do with their hearts as much as their heads - and some of the 20th century's greatest photographers and most famous images were taken using them. It is no surprise then, that - despite talking about it for at least five years - Leica felt no need to rush into things when they decided it was time to bring the M into the digital age.

And so, fifty-two years after the M3, and just in time for Photokina, Leica has made another historical introduction, the first digital M series, the M8. This new rangefinder digital camera has the classic design, build and function of the M series but utilizes a completely digital imaging system. The M8 has a specially designed ten megapixel CCD sensor which being slightly smaller than a film negative introduces a 1.33x field of view crop. This ratio conveniently converts several standard M lenses to sort-of equivalent steps (so 21 mm to approx. 28 mm, 28 mm to approx. 35 mm).

The M8 is not an adapted M7, it is a totally new camera with a new body (albeit one that bears all the usual M trademarks), a new viewfinder and a new sensor. Nor is it *necessarily* the end of the line for M film cameras; Leica is leaving that door open, for the moment at least.

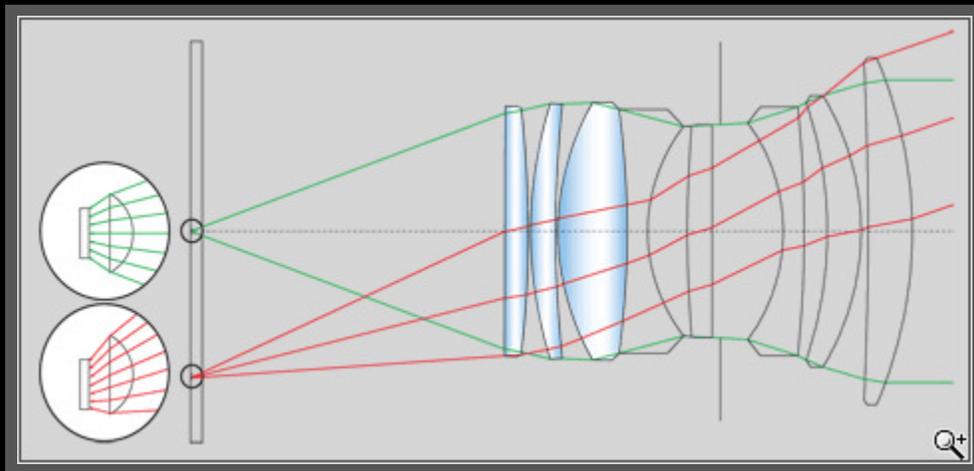
### Solving the corner vignetting problem

Because a rangefinder camera doesn't have a mirror box doesn't need to use retrofocus lenses, meaning they sit much closer to the film (or in this case the sensor). The problem with this comes with wide angle lenses (which are pretty much the main staple of the rangefinder camera). Towards the corner of the frame the angle of incidence of light coming from the rear of the lens is so severely off-perpendicular that they would not pass equally through the microlenses above the sensor leading to fairly strong vignetting. Even a modest wide angle lens at this kind of distance could produce a difference of a stop or two between the center of the frame and the edges using a standard CCD sensor.

Leica, obviously keen to solve this problem, took a three pronged approach with the M8:

1. **Don't use a full frame sensor** - at this time it would be cost prohibitive and too complex to produce a sensor which can cover the entire 36x24 mm frame and still work with rangefinder lenses. For this reason the M8's sensor measures 27x18 mm (or 1.33x crop).
2. **Use offset microlenses** - instead of placing all microlenses directly over the photodiode they are gradually offset as you get closer to the edge of the frame (see below).
3. **Know which lens is being used and apply some software correction** - all new M series lenses now carry a **six-bit code** which allows the M8 to identify which lens is used and (optionally) apply a 'final stage' software based vignetting correction (for RAW images the lens used is simply recorded, no change is made).

Below is a diagram provided by Leica which does some way to explaining how microlenses at the edge of the frame are offset from the photodiode below them, compared to a normal microlens / photodiode combination in the center of the frame.



### Tri Elmar M 16-18-21 mm F4 ASPH lens

In conjunction with (and ideally suited for) the M8, Leica has also announced the Tri Elmar M 16-18-21 mm F4 Aspherical lens. Tri Elmar lenses are not zoom lenses but are instead specially designed to provide optimum performance at their selectable focal lengths. On the M8 this lens will provide an equivalent field of view of 21-24-28 mm. This is a normal M series lens and is not in any way specially optimized for the M8 (and so will work just as well on a traditional M series camera).



#### Also available in Silver

If you prefer your Leica with a more traditional look (I'm sure there'll be some argument over that) then you can buy the M8 in Silver.



#### Rangefinder advantages / disadvantages (for the uninitiated)

- Fewer moving parts (no mirror or diaphragm) means slower shutter speeds possible (-2 EV)
- More compact, discrete and quieter than an SLR
- Shorter shutter lag
- Lenses are considerably smaller than an equivalent SLR lens
- No auto-focus makes them less suitable for action shots (or at least doing so requires a lot more skill)

- Many users claim rangefinder focusing is faster than using a focusing screen
- Rangefinder
  - You are not looking through the lens itself and do not have a focusing screen hence it is more difficult to get a sense of depth-of-field
  - Framelines indicate the field of view of different lenses
  - Because there is no mirror you have no mirror black-out
  - Brighter than any SLR viewfinder, and not affected by lens maximum aperture
  - Not as accurate as an SLR viewfinder, especially with longer lenses (or close subjects)
- Longer minimum focus distances compared to an SLR
- Virtually no telephoto lenses beyond 135mm
- Very wide angle or telephoto lenses require an accessory viewfinder, meaning focus and framing are separated

### Leica M series History (brief)

- M3 (1954 - 1966)
- MP (1956 - 1957)
- M2 (1958 - 1967)
- M1 (1959 - 1964)
- M4 (1967 - 1975)
- M5 (1971 - 1975)
- CL (1973 - 1976)
- M4-2 (1977 - 1980)
- M4-P (1980 - 1986)
- M6 (1984 - 1998)
- M6J (1994)
- M6 TTL (1998 - 2002)
- M7 (2002 - )
- M8 (2006 - )

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### Foreword / notes

If you're new to digital photography you may wish to read some of our [Digital Photography Glossary](#) before diving into this article (it may help you understand some of the terms used).

Conclusion / recommendation / ratings are based on the opinion of the author, we recommend that you read the entire review before making any decision. Images which can be viewed at a larger size have a small magnifying glass icon in the bottom right corner of them, click to display a larger image in a new window.

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