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TEMAT WYDANIA: **OPTYKA FILMOWA**
„BOGOWIE”: PIOTR SOBOCINSKI JR
RELACJA: IBC 2014
CAMERIMAGE: TRZY FILMY KONKURSOWE

ILLUMINA MK-II

TEXT: Tomasz Wolski

In the "FilmPRO" editorial, there was a set of Illumina MK-II film lenses from LOMO, a legendary producer of film cameras and lenses, with which the likes of Andrzej Tarkowski - among others - has shot films. We decided therefore to take a look at not only the lenses, but their history as well. But first, I would like to draw attention to the name itself: The Leningrad Optical-Mechanical Association, abbreviated in Russian as LOMO. On the camera body the name is simply written as LOMO, so from now on I will use only this term.

The first LOMO factory was established exactly 100 years ago in 1914 in Saint Petersburg, as a cooperative effort between the Russians and the French. During the First World War it supplied the Russian army with weapon sights, and in 1933 produced its first film camera. Russian - and later Soviet - optical plants operated under different names over time as a result of their reorganization: WTOMP; WOOMP; GOMZ; and in 1962, they took the name LOMO, only soon after to change it again to LOOMP. Through the years the factory produced many items including Smiena and LOMO LC-A cameras, a copy of the Lecia camera under the name VOOMP, 8mm and Super 8mm cameras (e.g. Aurora, Lantan, Sport, and of course Lomo), as well as lenses for Konvas and Kinor cameras. In 1993, LOMO was privatized. Today, it produces mainly telescopes and microscopes. The last lenses to come out of the LOMO factory were produced in the early 90s. This appeared to be the end of the production line of e.g. LOMO's anamorphic lenses,

which are very commonly used by camera operators in short films and commercials. These and LOMO spherical lenses (COT18 and OCT19) are still very attractive in an era of vintage fashion. Their imperfection provides the ideal contrast to the exaggerated perfection guaranteed to us by the producers of modern cameras. They soften the image, are less contrastive, whites are accompanied by a halo effect, and shining lights create a unique flare and unusual reflection. This however, is a topic for another article.

Drawing our attention back to LOMO, it turned out that the history of these lenses with their legendary emblem did not end in the 90s. They are currently being produced by Luma Tech, a Canadian company whose founder and director is Russian Gregory Mirand. He is not just any man. In 1972, he graduated from the Leningrad Institute of Film Engineering, which from today's point of view is very curious given that such courses of study no longer exist. Mirand quickly left the Soviet Union and settled in Canada, where he began to collaborate with Kingsway Ltd., a company dealing in the sale and service of film and audio equipment. What is interesting is that at the time, Kingsway was the only representative of Jean-Pierre Beavial, or Aaton, cameras. Mirand thus became one of the most sought-after engineers and chief specialists of this French camera. Mirand spent the following years at W.F. White, where he trained technicians and oversaw the film equipment rental department. When Panavision bought out White, Mirand began operations on his own account and in 1997, founded Luma Tech.

Pic. 1. Lens cover with LOMO graphic symbol from old lens with OCT19 mount



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Pic. 2. Lens set ILLUMINA Mark II

- Luma Tech initially produced high-speed lenses (T1.3) for Super 16 cameras, and in recent years has also begun selling Super 35 high-speed prime lenses. Mirand not only draws from his own experience, but also from contacts in Russia. Illumina lenses are assembled for the Luma Tech project in a factory in Saint Petersburg. The glass however originates from the storehouses of Schott, a German optical company which supplies the largest of lens producers. LOMO specialists then process and coat them according to their own formula.
- Illumina lens prototypes first saw the light of day in 2009 at the NAB show in Las Vegas. They hit the shelves for public sale one year later. Initially on offer from Luma Tech were lenses with 18mm, 25mm, 35mm, 50mm, and 85mm focal lengths. Then came a 135, and recently a 14 as well. They all have a T1.3 aperture minimum, except for the 14 and 135mm lenses, on which the "full aperture" is set to T1.8. The new lenses are marked as MKII. This is how Luma Tech has designated the ones produced after 2011. At that time the LOMO factory purchased new machinery and chose a team of workers, which deals exclusively with lenses. They introduced a modification that reduced internal friction in the focus mechanism.



Pic. 3. Zeiss Master Prime 35mm and Illumina MK-II 35mm

- Visually, Illuminas resemble Zeiss Master Prime lenses. Aperture and focus designation are in yellow. The aperture ring, in contrast to other lenses, is located near the front lens. This appears to be inherited from older lenses.



Pic. 4. New and old LOMO - on the left Illumina 35mm, on the right LOMO 35mm OCT19

- All Illuminas have a PL mount and a 95mm front element diameter, except for the 14mm lens (which has a 120mm). They have a 5K resolution, and the focus ring rotates 270 degrees. These lenses are not heavy, as they weight about 1.5-2kg each. In comparison with the Zeiss Master Prime they are much smaller.



Pic. 5. Zeiss Master Prime 35mm, Illumina MK-II 35mm, and Zeiss CP2 35mm

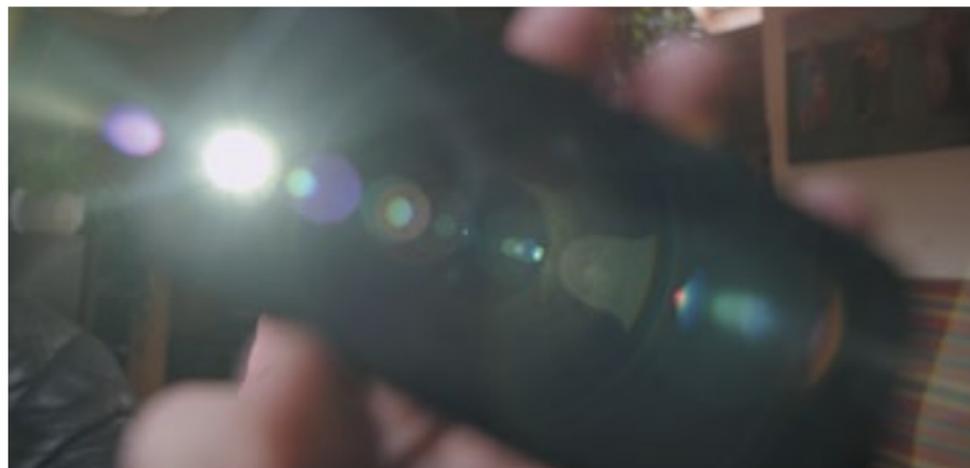
- The image obtained from these lenses is sharp and at first glance is comparable with the Zeiss Master Prime. I showed experienced camera operators materials shot with both lenses and they were not sure which was which. The full aperture opening in the Illuminas obviously causes more blurring and softens the images, with chromatic aberrations also visible, but the drop in value is comparable to the lenses of other companies. I also discovered an interesting contour with the backlight. However, this may just be an effect of reflections that appear between the lens and OLPR/IF filter in the camera. When filming vertically with the Illumina 18mm I did not notice any distortions. They do appear with the 14mm, but I must admit that they are not significant.
- Illuminas, as with the Cooke Mini S4/i lenses, are available in two versions: with and without the anti-reflection coating. In the case of the Cooke lenses, a version must be chosen at the time of purchase; but the Canadian producer proposed a payment for additional lenses (\$4,800 per set for 18-85mm focal length). Apparently changing the lens is not complicated and can be done using the appropriate tools. This means that in a few minutes you can change a perfect image to "vintage".
- I compared 18mm lenses with and without the anti-reflection coating. There was a great difference. Directing the light into the camera with a standard coating, we get a soft flare, and the source of light is outlined by a dust jacket. However, in the version without the coating, we get a whole set of different colored flares, or one large one in the case of a central light.



Pic. 6. Illumina 18mm with anti-reflection coating



Pic. 7. Illumina 18mm without anti-reflection coating. Central light source



Pic. 8. Illumina 18mm without anti-reflection coating

A few years ago during a lens presentation in Saint Petersburg, Gregory Miranda said, "We have created unique lenses of the same quality as those manufactured by the world's leading producers of optics. At the same time, we have been able to achieve the optimal value for money." There is some truth in this, given the price of the competition. The price for a set of Illuminas (18mm - 85mm) is almost 30,000 euros net, which is similar to the amount you would have to pay for a Cooke mini S4/i set. But the Cooke lens has a minimum aperture value of T2.8. Illumina lenses generally make a good impression. In Poland, camera operators use them mainly in advertisements and short student films. Abroad they have been used

by e.g. Werner Herzog when filming "Queen of the Desert" featuring Nicole Kidman. Luma Tech also has some interesting plans for the future. The company wants to release a new series of lenses which have undergone complicated analyses and the Lumacon calibration system (a computer test which among others quickly identifies the best focus point, controls lens resolution, and indicated aberrations), and a backwards compatible solution for anamorphic lenses. The latter are to be relatively compact and reasonably priced. The producer has also revealed that they will have some surprising additional features, which at the moment are still a mystery. What exactly Luma Tech has in store we will find out at the next NAB show ☒

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