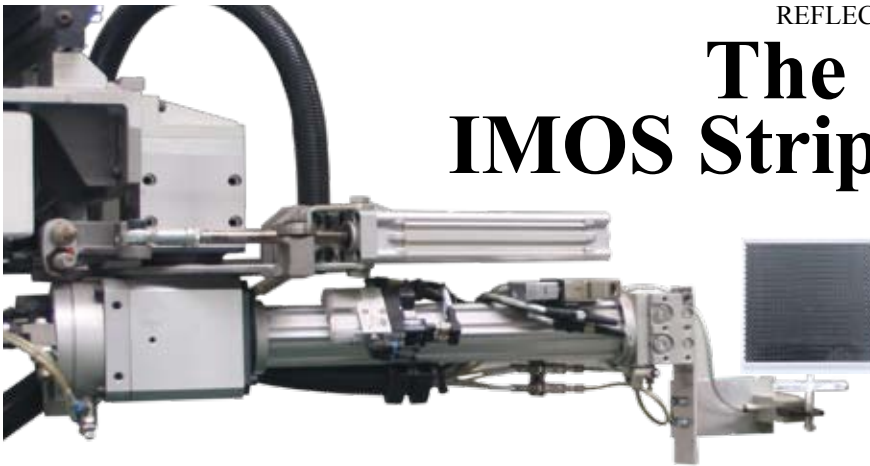


## REFLECTORS

## The new IMOS Stripe Reflector

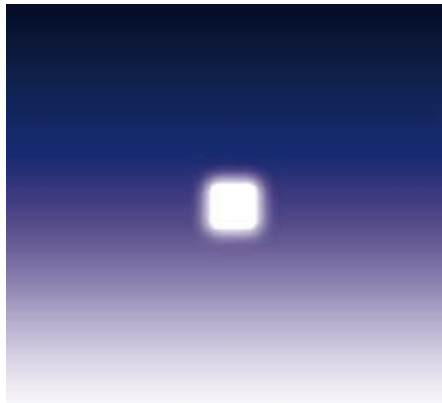


With the development of this novel reflector, the physicists at IMOS once again have shown their competence in reflector technology. For laser light barriers great reflection areas are used so that the laser beam doesn't leave the reflective area due to vibrations.

In order to be able to observe the reflector over large distances of 100 meters or more the emitter and the receiver are separated. When the reflector is moved closer to the emitter so that the distance is not any longer 100 meters but only e.g. 30 cm the reflected light will hit only the emitter. The receiver gets no light.

The newly developed IMOS-Stripe-Reflector sends back the light falling onto the reflector's square total area as merely a small strip

Reflection of a conventional reflective surface 100 x 100 mm



of energy. The strip like reflection allows the receiver to detect the reflection in any distance between 0 and 100 meters.

The construction is baffling. The newly developed reflector is not equipped with a lens.

The IMOS-Stripe-Reflector 100 x 100 mm sends back a concentrated strip of light



The reflection paths of the light are changed only through high-precision angular positioning of the triple-array's many component mirrors. The entering light is then diverted by total reflection and becomes one dazzling, bright strip of light.

## LENS SYSTEMS

## Projection lenses



Assembling hundreds of thousands of projection lenses and their housings precisely and manually – no thanks! Because the parts are very small, yet at the same time have to be assembled achieving a perfect fit, mounting is conducted by a robot. The whole lens system is densely welded using ultrasound.

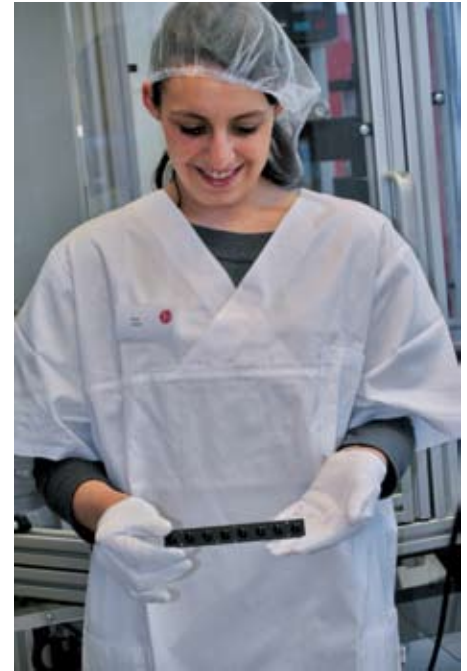
## LENS ARRAYS

## Light grid lenses

Sina is happy, because a perfect black light grid lens has once again been produced.

Light grid lenses are lens-arrays arranged in the shape of strips and then assembled to meter long rods. An LED is mounted as the emitter behind every lens. Opposite to this rod, a second lens array with receivers behind it is attached. Just like the rungs of a ladder, the rays of light form a protective grid. Metal forming presses, for example, are equipped with these light barriers to protect the operators. The black colouring of the light grid lenses gives protection from outside light. This is why the light grid works with invisible light with wavelengths of approx. 800 nm.

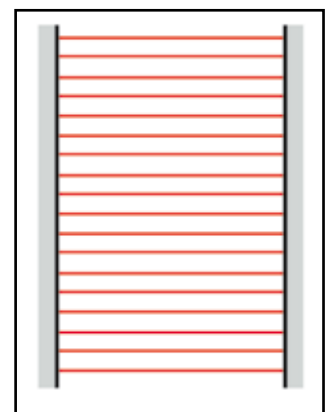
The array shown below has 8 lenses of equally high quality. During the manufacturing process, the plastic's long flow paths have to be controlled exactly, in order to ensure that the same pressure con-



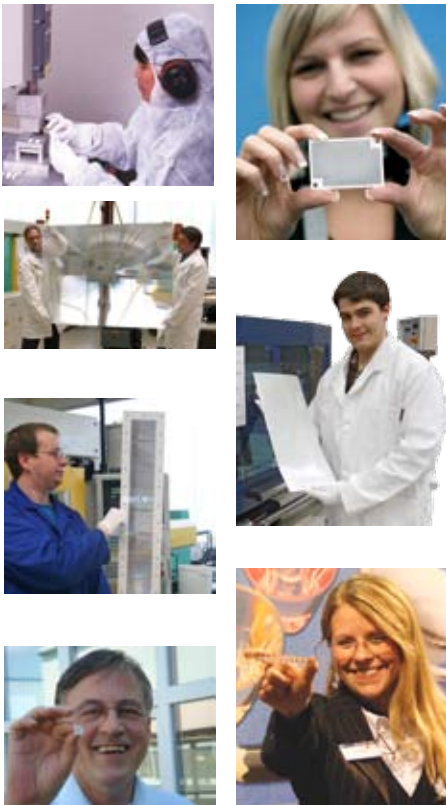
ditions exist in every lens when the liquid plastic "freezes". Here, the physicists at IMOS work in close cooperation with the plastic moulding technicians and the lens control group to achieve premium quality. Once all of the other steps of the procedure and tests have been successfully completed, Sina has reason to be happy.



Blister package



Functional principle of light grids



## PRODUCTIVITY

## 7 Days Wednesday

In recent years, IMOS employees have achieved successes in the various fields of optics. The goal is to ensure the reliable quality of our products. However, machines require long start-up phases at the beginning of the week to reach a stable temperature equilibrium in the machines' body, hydraulics and moulding tools. Measurements in the arc seconds range show the lowest tolerance levels in the middle of the week. Therefore now the production process has been switched to an uninterrupted, continuous operation mode. Employees will continue to have a 40-hour work week, however, it is Wednesday on seven days of the week in terms of product quality.