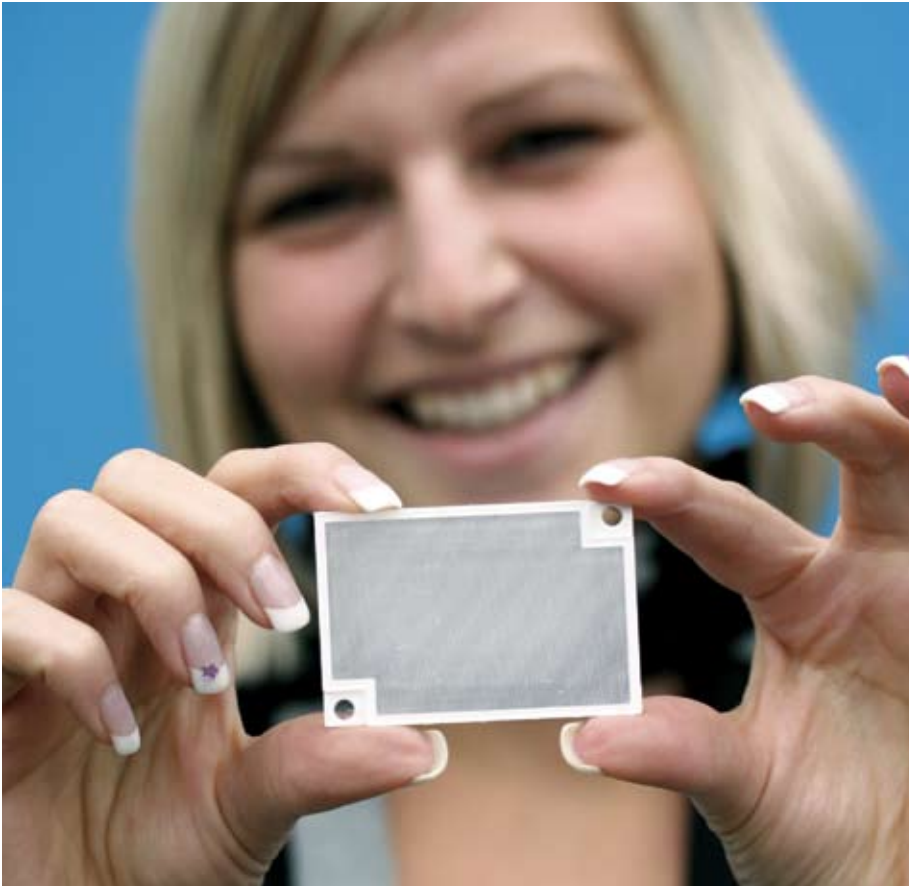


## 12,000 Millicandela Smiling Back



The 40 x 60 mm IMOS Microcube reflector now has nearly twice the reflective power, for crystal clear sensory recognition.



### What would Monsieur Fresnel say to that?

His revolutionary invention is used not only in lighthouses, but also in IMOS imaging lenses. Microstructure technology is so good these days that a 2.8 mm thick wafer such as this one gives such clear images that the Fresnel rings are not even discernible. (In this example,  $f = 90$  mm, magnification approximately 2.5) See also the alternative lenses on page 2.

### Microcamera sees considerably better with integrated IMOS lighting module

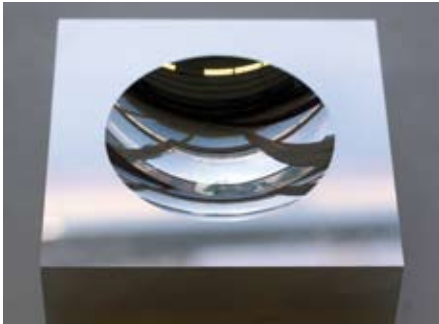
Custom optical solutions make up a big part of production at IMOS these days. We have just successfully started production of a lighting module as a complete component of a sensor microcamera.

The smooth running of this multi-stage production – from design and mould construction to production and final assembly of the components – attests to the success of the quality assurance system IMOS has established over its many years. The lighting module has enormously improved the microcamera's analytical capabilities.



### Producer and service provider

The joy in coming up with new product solutions together with customers is the driving force behind the advancement of research and production.



## Tool for a plano-convex lens

The bulging shape of the  $\varnothing$  65 mm lens can be seen clearly on the tooling insert. This lens is roughly equal in size and focal length to the Fresnel structure on page 1, but is four times thicker than the flat Fresnel wafer. These two lenses are a good demonstration of IMOS's manufacturing capabilities.

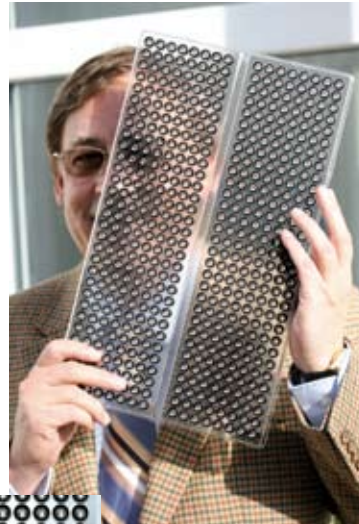
There are many advantages to the IMOS Fresnel lens in various technical applications, given its low installation height and considerably lower material usage. Which production method IMOS will use in its tool making will be decided only when the data for the custom project is available.

## Sensor gets glasses



A push-fit magnification lens for a light sensor of 700 nm wavelength.

# Here come the high-performance LED lamps



These IMOS LED lenses come all together in black mounting bodies. 496 pieces make up one blister sheet. The very low energy consumption and long life of the new high-power LED floodlights help to protect the environment.

Gone are the days of sweating under the spotlight at your exhibition stand. Enter the new IMOS LED lenses, the light from which contains next to no heat radiation. Hundreds of tiny collective lenses add up to a high-power floodlight or street lamp. Since IMOS's intention is to provide these high-precision collective lenses at unrivalled prices, the lighting industry can expand its range of economical applications.

## Solar technology

The IMOS team has been given the fascinating task of designing and manufacturing the lenses for an innovative solar module. Weekly videoconferences are a wonderful solution to the long distances between the individual workgroups.

The aim is to produce significantly lower-priced solar modules for the open market. Concentrating the light enormously increases the power rating of these novel solar panels. This is an example of environmental protection through intelligent optics.

## The zeroth order

Diffraction optical elements (DOE) bend the light to our will. The IMOS team has now considerably increased the efficiency and reduced the power of the zeroth order. DOEs are made of glass or plastic.



Wafers with various DOEs.