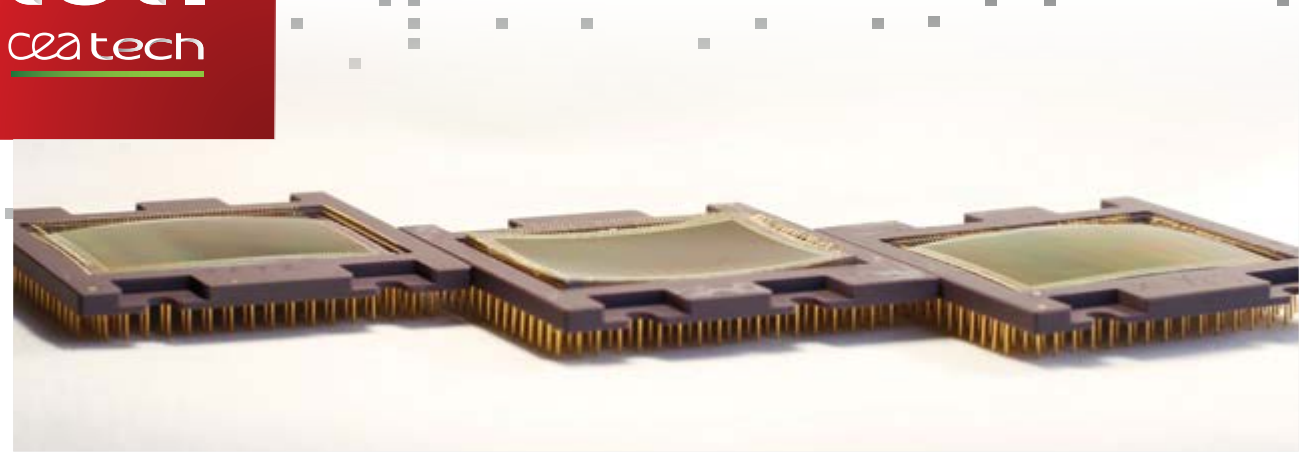


PIXCURVE

TOWARDS MORE CURVED OPTICAL COMPONENTS

PATENTS 7 PATENTS +5 pending

WHAT IS PIXCURVE?

Pixcurve is a proof of concept, introducing Leti's latest curving technology for various optical components, such as visible imagers, µdisplays, bolometers and IR detectors. This technology addresses companies' growing interest in a range of curved optical components that will help them achieve higher levels of performance and compensation for optical aberrations, while minimizing the vignetting effect and enhancing field of view. It makes cameras, imagers or microdisplays even more compact and easy to assemble.

APPLICATIONS

Leti's technology can be adapted to curve various optical components such as:

CMOS & CCD imagers to be used in:

- Mobile phones
- Photography
- Astronomy
- Medical diagnosis and treatment
- Defense / Security / Drones
- Industrial controls

IR sensors to be used in:

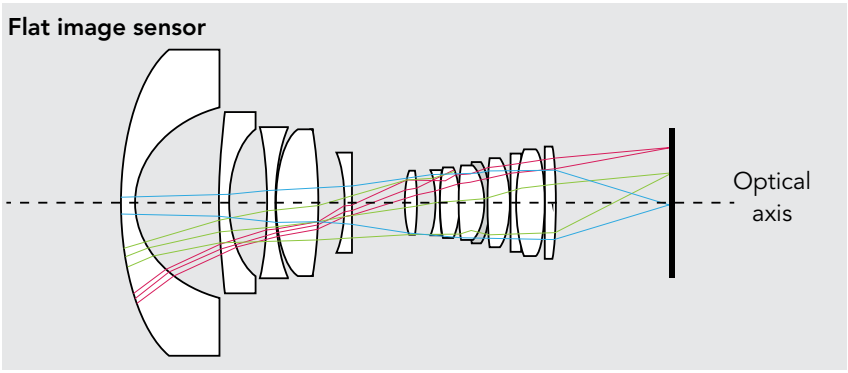
- Astronomy
- Defense / Security / Drones
- Industrial controls

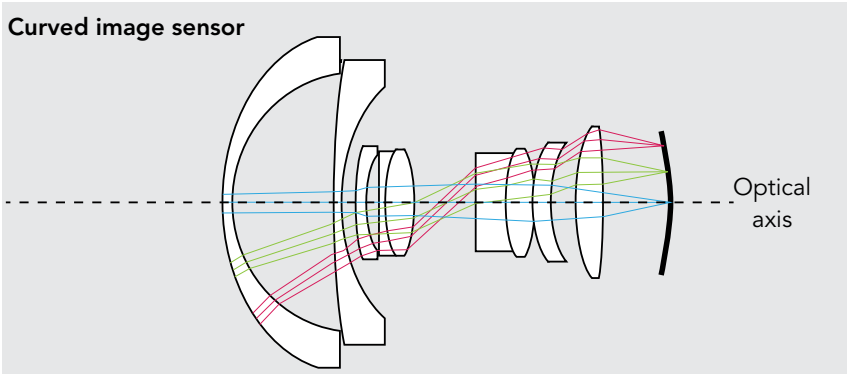
Microdisplays to be used in:

- Automotive vehicles
- Augmented reality / Virtual reality
- Defense / Security / Drones

WHAT'S NEW?

To make imaging or photographic products lighter and more compact, Leti worked on an aggressive curvature radius and spherical & cylindrical curvature of image sensors, imagers and microdisplays. Aspheric shape can also be achieved with tunable curvature and collective technologies.





WHAT'S NEXT?

Leti is currently working on:

- Collective curvature technology for high-volume market applications
- Tunable curvature for high-end optical applications
- Curved microdisplays
- Optical designs dedicated to curved sensors

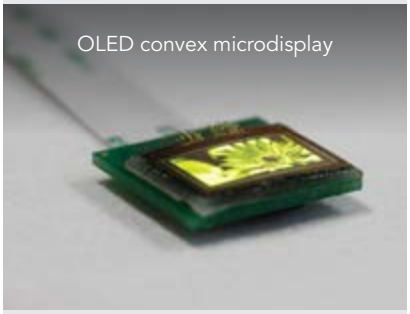
The institute is also partnering with companies to establish supply-chain solutions to manufacture products leveraging pixcurve technology.

PUBLICATIONS:

Dumas, D. et al, "Curved focal plane detector array for wide field cameras", Applied Optics 51, no. 22, pp. 5419-5424 (2012).

Chambion, B. et al, "Tunable curvature of large visible CMOS image sensors: Towards new optical functions and system miniaturization", 66th ECTC, (2016).

Gaschet, C. et al, "Curved sensors for compact high-resolution wide field designs". Proc. Vol. 10376, SPIE Optical Engineering + Applications, (2017) San Diego, CA, USA.



INTERESTED IN THIS TECHNOLOGY?

Commercial contact:
Alexis Rochas
alexis.rochas@cea.fr
+33 438 785 492

Leti, technology research institute
Commissariat à l'énergie atomique et aux énergies alternatives
Minatec Campus | 17 rue des Martyrs | 38054 Grenoble Cedex 9 | France
www.leti-cea.com