

# LCOS - Spatial Light Modulators

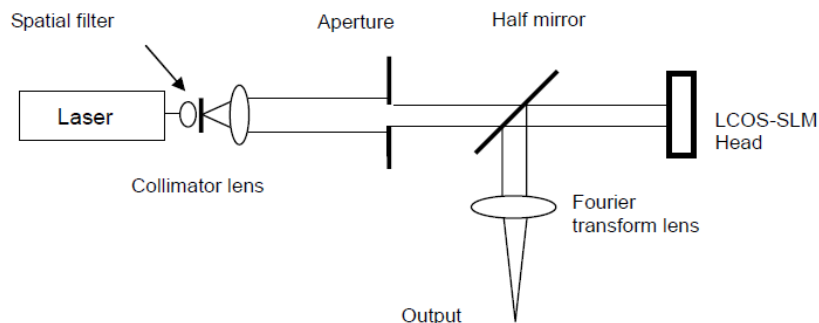
## *Optical Setup Examples*

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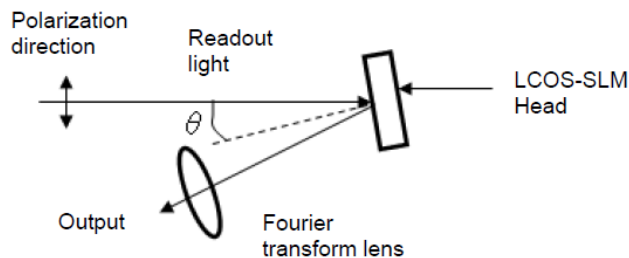


## Optical Setup examples

Example optical system setups using the LCOS-SLM are shown in the figure 14 and 15. Example 1 is an optical system using a half-mirror. Example 2 shows an oblique-incidence optical system. One merit of the setup in Example 2, compared to the setup in Example 1, is that the amount of light loss due to the half-mirror is reduced.



**Fig.14 Example1**



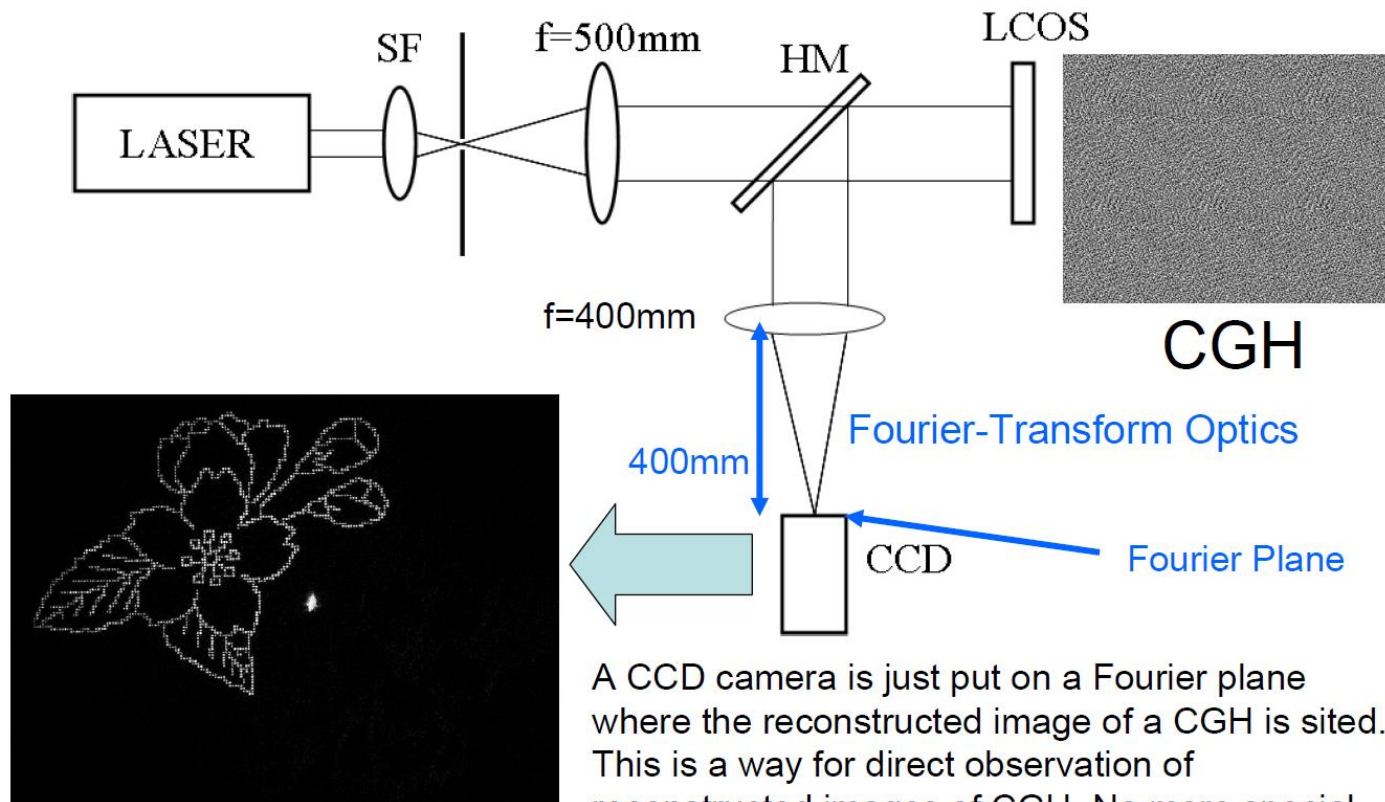
**Fig.15 Example2**

*Advice:* In the oblique-incidence optical system in Example 2, use an incident angle  $\theta$  of  $5^\circ$  or less.

*Advice:* In the oblique-incidence optical system in Example 2, the incident light should be horizontally polarized\*.

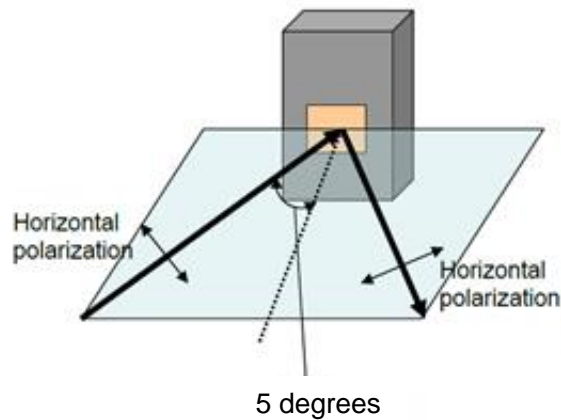
\* Horizontally polarized means a polarization direction parallel to the plane including the incident light and the reflected light.

## Optical Setup examples



A CCD camera is just put on a Fourier plane where the reconstructed image of a CGH is sited. This is a way for direct observation of reconstructed images of CGH. No more special arrangements are not applied. The CCD camera used is an industrial one and is not a special one.

## Optical Setup examples

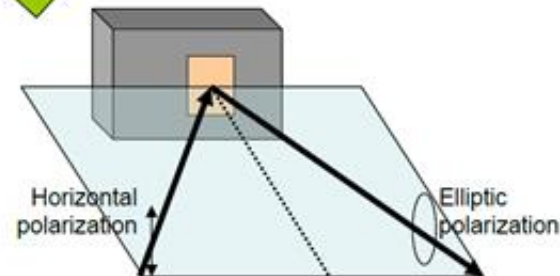
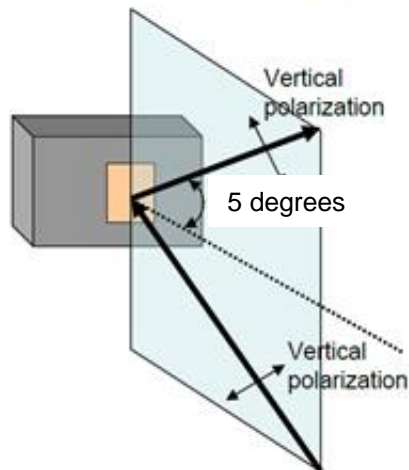


### Oblique readout optical setup

→ wrong configuration

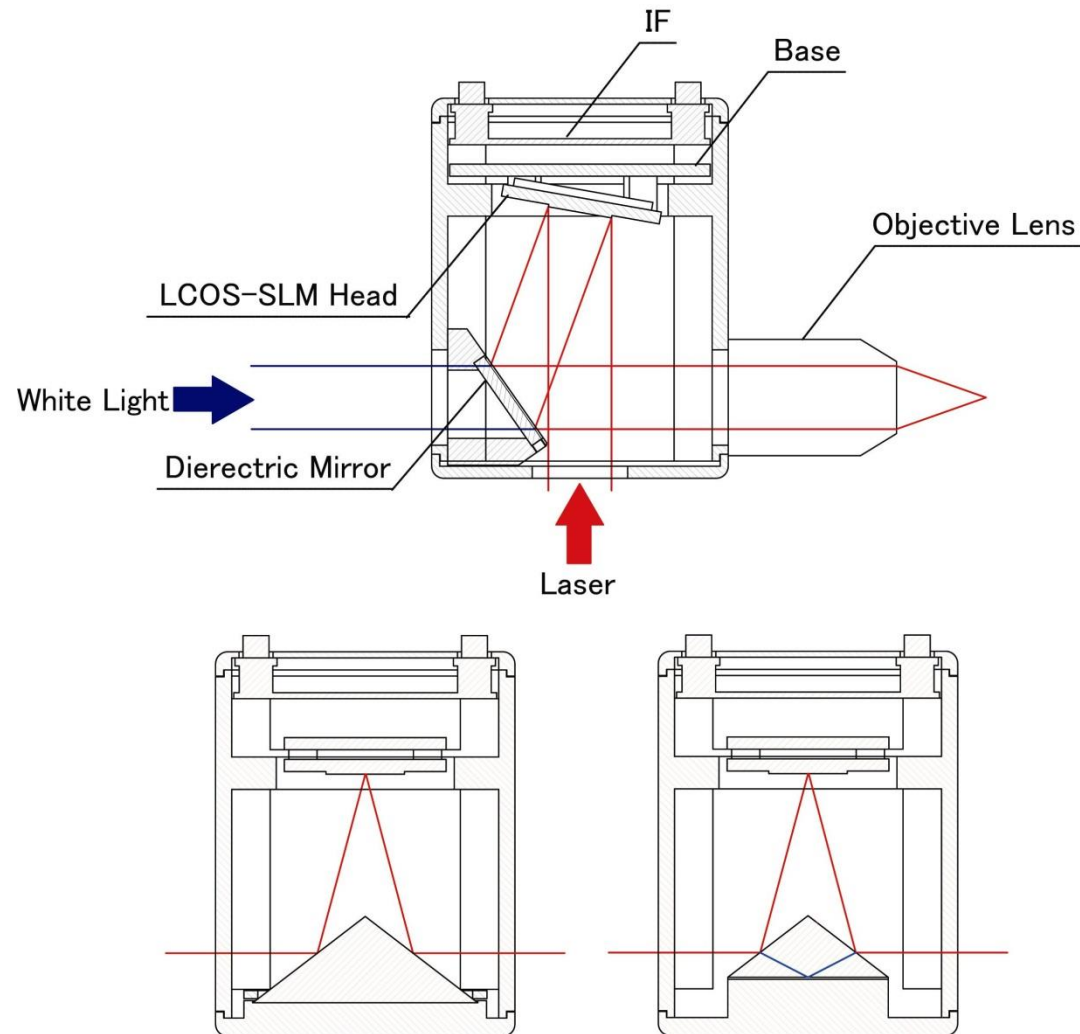
The polarization of the laser beam should be rotated 90 degrees and the horizontal polarization should be used.

← Correct configuration

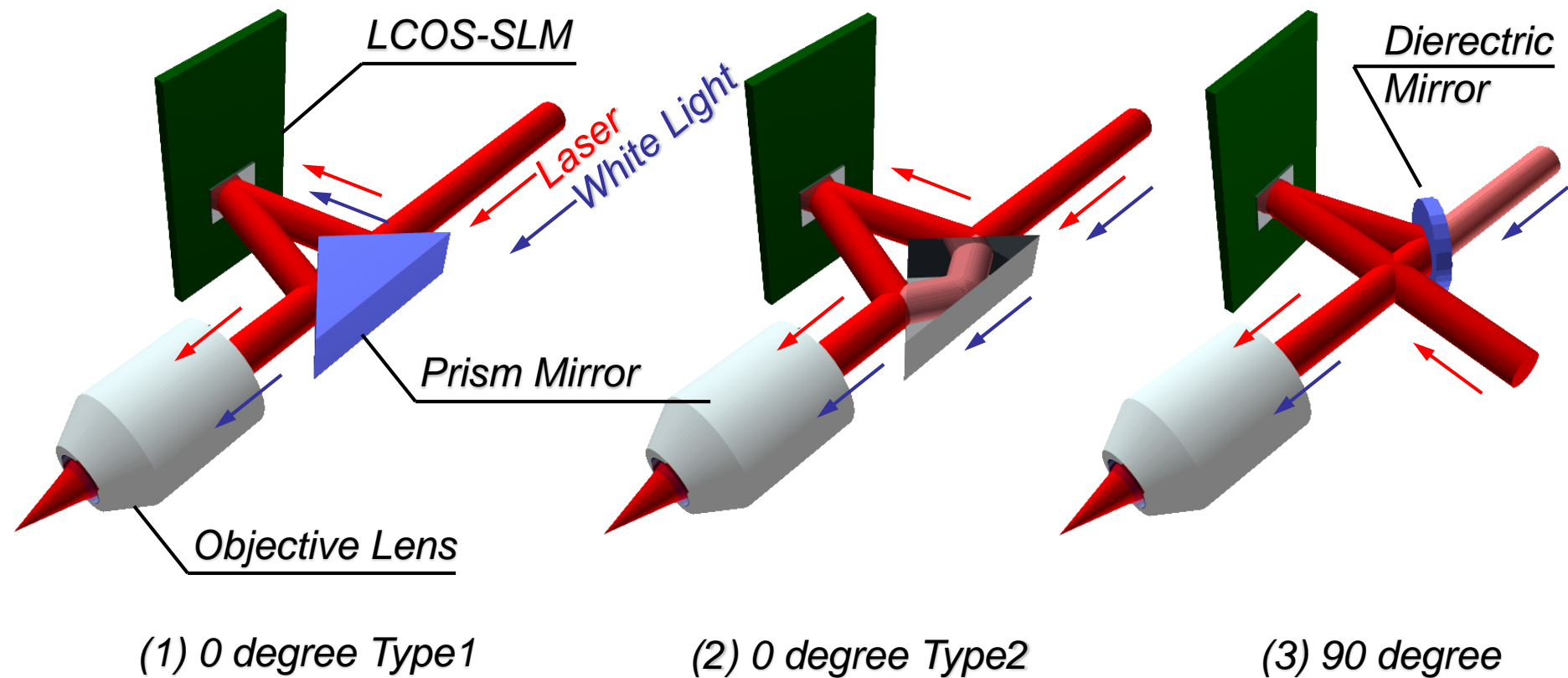


The linear polarization of the incident beam is changed to the elliptic one.

## Optical Setup examples



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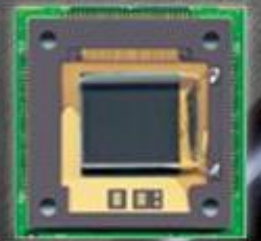
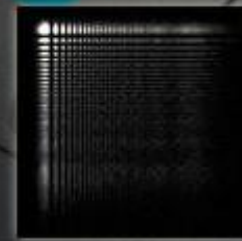
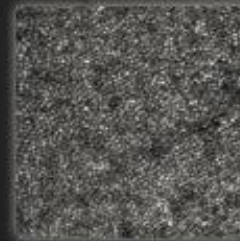
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## LCOS - Spatial Light Modulators

Control your light  
Shape your beam  
Improve your image



LCOS Community Website

**[www.hamamatsu.com/LCOS](http://www.hamamatsu.com/LCOS)**