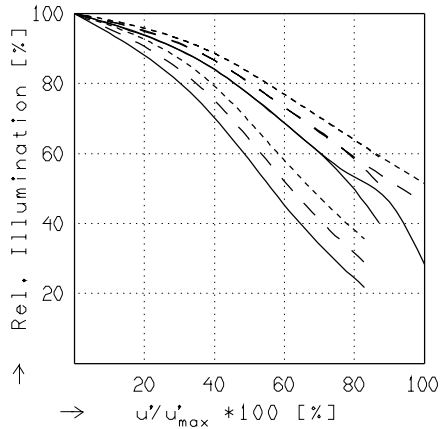
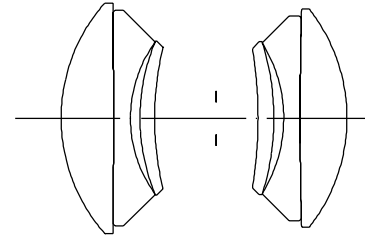


## AP0-SYMMAR 5.6/150

$f' = 151.5 \text{ mm}$      $\beta_p = 0.978$   
 $s_F = -125.3 \text{ mm}$      $s_{EP} = 29.5 \text{ mm}$   
 $s_{F'} = 125.1 \text{ mm}$      $s_{A'P} = -23.1 \text{ mm}$   
 $HH' = -3.5 \text{ mm}$      $\Sigma d = 49.0 \text{ mm}$

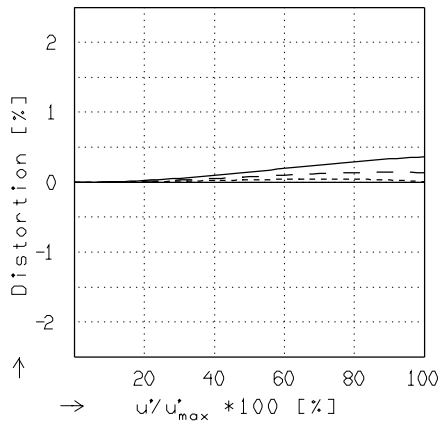


### RELATIVE ILLUMINATION

The relative illumination is shown for the given focal distances or magnifications.

$f / 5.6$      $f / 11.0$      $f / 22.0$

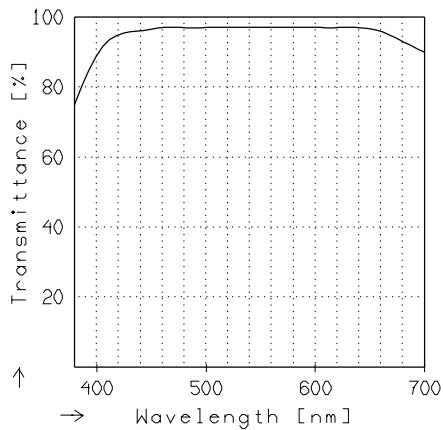
—  $\beta' = 0.0000$      $u'_{max} = 110.4$      $00' = \infty$   
 - -  $\beta' = -0.1000$      $u'_{max} = 110.2$      $00' = 1829.$   
 - · -  $\beta' = -0.2000$      $u'_{max} = 110.0$      $00' = 1087.$



### DISTORTION

Distortion is shown for the given focal distances or magnifications. Positive values indicate pincushion distortion and negative values barrel distortion.

—  $\beta' = 0.0000$      $u'_{max} = 110.4$      $00' = \infty$   
 - -  $\beta' = -0.1000$      $u'_{max} = 110.2$      $00' = 1829.$   
 - · -  $\beta' = -0.2000$      $u'_{max} = 110.0$      $00' = 1087.$



### TRANSMITTANCE

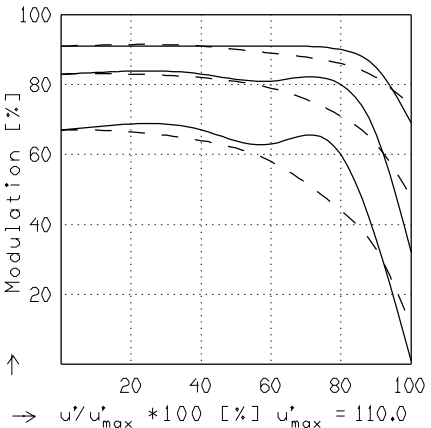
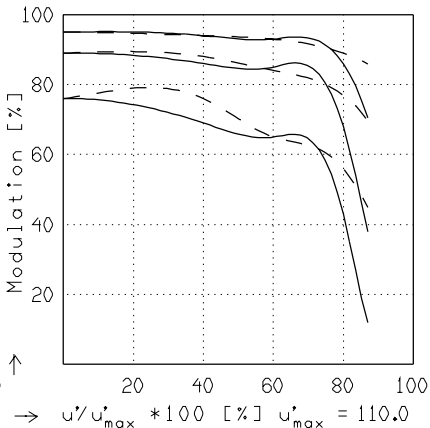
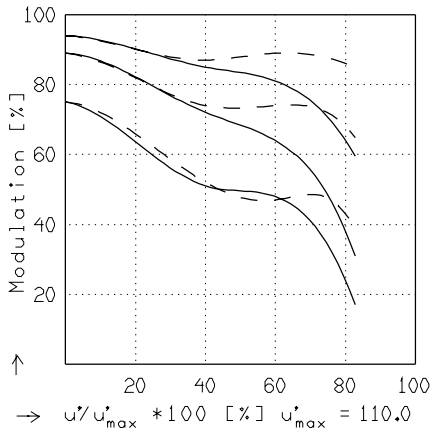
Relative spectral transmittance is shown with reference to wavelength.

**APO-SYMMAR 5.6/150**

**MODULATION** with reference to the relative image height

Wavelength $\lambda$	[nm] :	546	644	588	480	436	405
Spectral weighting	[%] :	24.6	18.6	22.1	12.4	15.2	7.1
Spatial frequency R [1/mm]	:	5	10	20			
Image- $\emptyset$ f / 5.6	[mm] :	182.2					
Image- $\emptyset$ f / 22.0	[mm] :	220.0					

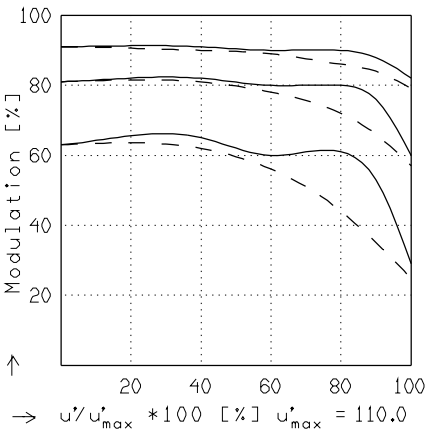
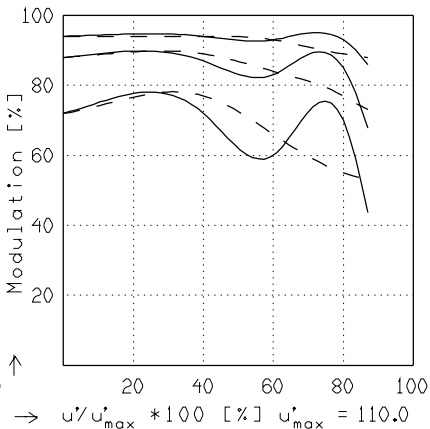
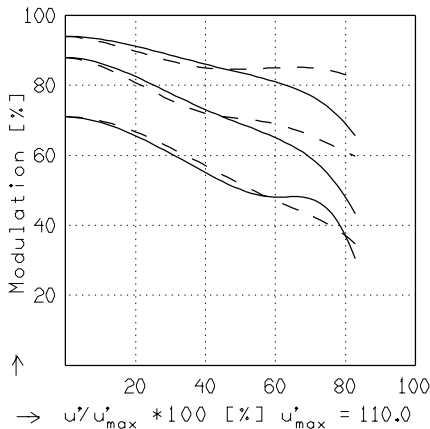
radial —  
tangential - -



$f' = 151.5$   $f / 5.6$   $1/\beta^* = \infty$   $00^* = \infty$

$f' = 151.5$   $f / 11.0$   $1/\beta^* = \infty$   $00^* = \infty$

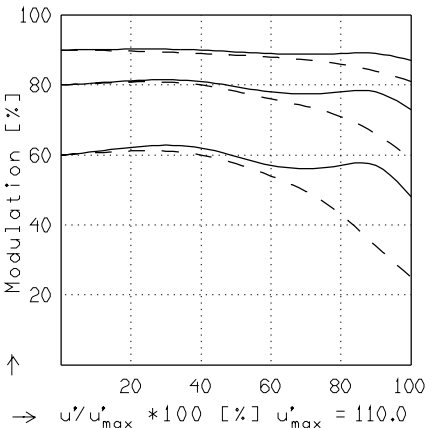
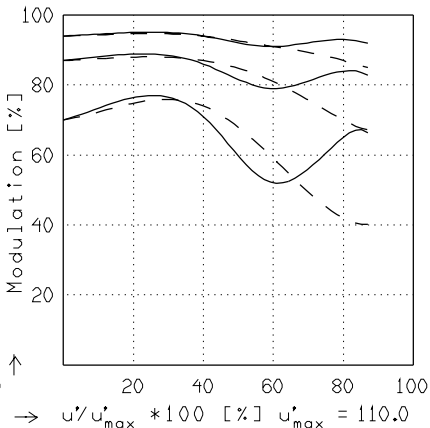
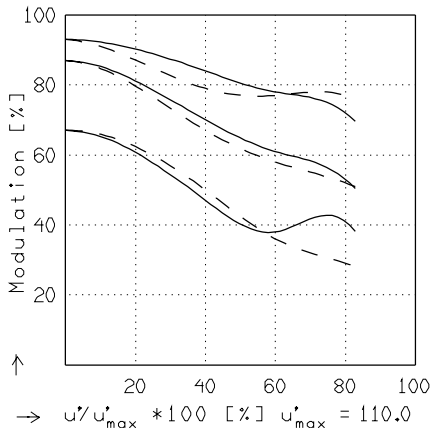
$f' = 151.5$   $f / 22.0$   $1/\beta^* = \infty$   $00^* = \infty$



$f' = 151.5$   $f / 5.6$   $1/\beta^* = -10.00$   $00^* = 1829.$

$f' = 151.5$   $f / 11.0$   $1/\beta^* = -10.00$   $00^* = 1829.$

$f' = 151.5$   $f / 22.0$   $1/\beta^* = -10.00$   $00^* = 1829.$



$f' = 151.5$   $f / 5.6$   $1/\beta^* = -5.00$   $00^* = 1087.$

$f' = 151.5$   $f / 11.0$   $1/\beta^* = -5.00$   $00^* = 1087.$

$f' = 151.5$   $f / 22.0$   $1/\beta^* = -5.00$   $00^* = 1087.$

Focusing :  $MTF_{max}$  at  $f / 5.6$  ,  $R = 20$  1/mm,  $u'/u'_{max} = 0$

