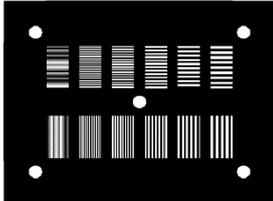# LabSoft AddOn **StickingImage**

Running the Sticking image measuring procedure

- Install the '29_Lmk_LabSoft_StickingImages_AddOn_YYYY_MM_DD.exe' after installing a LMK LabSoft standard version package.
- A new Icon 'SI' and the new submenu entry 'Sticking image application' in the Main menu 'Evaluation' will be created.
- Consider the following measurement conditions to receive valid and reproducable results:

Room	temperature	25°C / 77°F
Display	backlight	Set the maximum brightness level (to reduce the influence of PWM)
Camera	properties	The resolution of the camera sensor must be higher than the display resolution
	position	Choose the focal length of the lens and set the measuring distance so that the whole image of the display shall be as large as possible on the image sensor (employs maximum number of pixels of the sensor)
		The display image has to be centred within the camera image (in relation to the optical axis of the lens)
		Align the display orientation in relation to the camera position – each tilt angle has to be less than 0.5° in each axis (you can use the 'Camera set-up' dialog in combination with the alignment picture on the display) *• Use Main menu 'Evaluation | Create a luminance testimage…' Select the register 'Adjustment | Camera adjustment')* *• Ensure, that the right display target is selected on top of the 'Template image generator' dialog)*
	focus	Avoid aliasing effects (set a slight de-focus with a modulation depth of >50% for V4 x H4 grid patterns of the adjustment image)
Measurement	Integration time	The integration time shall be adjusted for an optimum measurement precision in de SI measurement of the grey image. (Burn-In image will be usually overloaded)

- Select the 'SI'' icon:
  - The following tables will be created:

    STICKING IMAGES - REGIONS, STICKING IMAGES - CURRENT IMAGE, STICKING IMAGES - ALL RAW DATA, STICKING IMAGES - BLACK RESULTS, STICKING IMAGES - WHITE RESULTS, STICKING IMAGES - COLUMN RESULTS, STICKING IMAGES - RESULTS and STICKING IMAGES – DIAGRAM
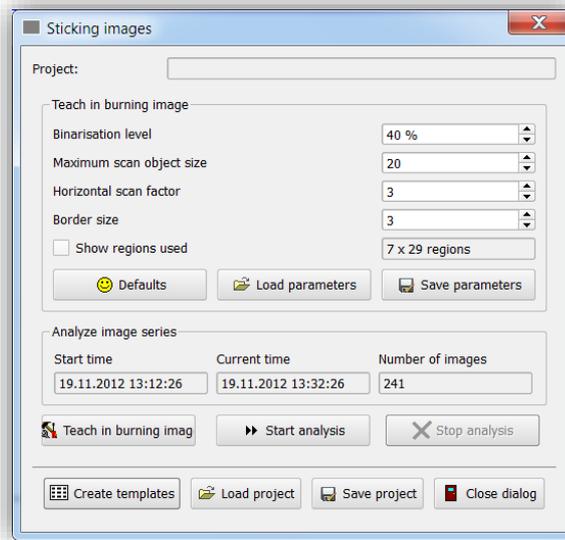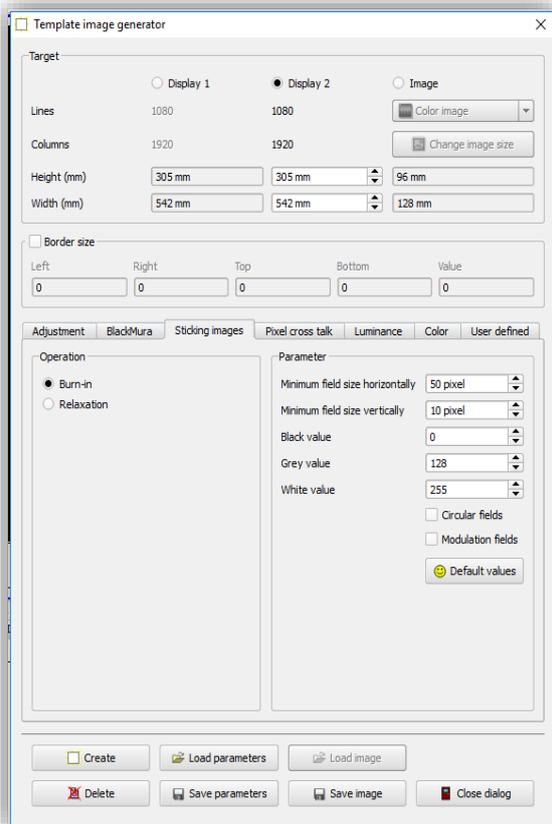
o The Sticking images dialog will appear
o Clicking the 'CREATE TEMPLATES' button opens the 'Template image generator'

▪ In the register 'Sticking images' choose the 'Relaxation' pattern, which will create the following test picture on your display:
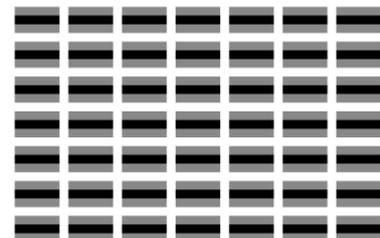

relaxation pattern

▪To fix the integration time, make an 'Autoscan' in the Livemode of the LMK

▪In the register 'Sticking images' choose the 'Burn-in' pattern, which will create the following test picture on your display:

three level burn-in pattern

▪Use the LMK to capture the display image and creating a luminance image

- o Use the „TEACH IN BURNING IMAGE" button of the 'Sticking-Images' dialog to calculate the regions. (Show the regions with the flag 'SHOW REGIONS USED'. The number of regions is shown next to the flag.)

- See the schedule of the measurement in the following table:

| Step	Display Image	Image capture	Duration (min)
Burn-In	Three level burn-in pattern	1	60
Relaxation	Grey image (relaxation)	$\Delta t_c < 10s$	>10

- After 60min burn-in time of the test pattern, enable the SI-measurement by pressing the button 'START ANALYSIS'

- Configure the measurement series for the SI-analysis using the Main menu 'Capture | Measurement series | Time controlled capture series| Time list'.

- Choose a directory, where you want to store the captured images using: 'Capture | Measurement series | Time controlled capture series | Images |Image directory'
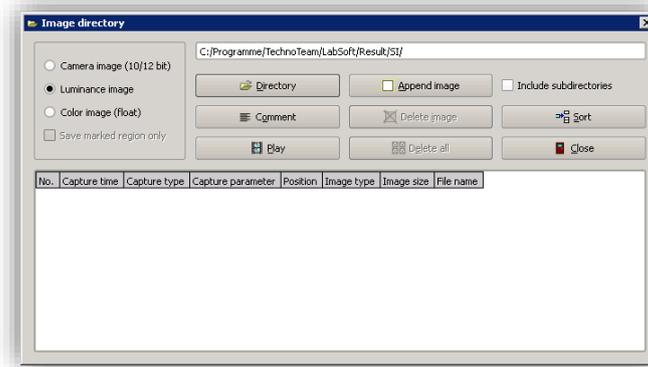
- Press the 'START' button in the dialog 'Capture | Measurement series | Time controlled capture series' to start the measurement series
- Change the 'Burn-In' pattern on the display screen to the grey 'Relaxation' pattern using the 'Template image generator' dialog'

Analysis of the Sticking image measuring results

- After measuring different tab-sheets, containing auxiliary and finally results are available (see above). All sheets can be exported to MS Excel for later on evaluation.