

# LCD PROJECTOR

## LENS REPLACEMENT AND INSTALLATION PROCEDURES

### CAUTION

When installing or replacing the Projection Lens, refer to this manual. For installation of the lens, use the parts designated in the manual. Do not use the installation manual and Light-Block Sheets in the lens package.

Check the following parts supplied to this projector.

- LIGHT-BLOCK SHEETS 6 pcs.
- LENS ATTACHMENT (01) 1 pce.
- LENS ATTACHMENT (02) 1 pce.

### AVAILABLE LENS

This projector applies the Projection Lenses listed below. Use the suitable lens for where the projector is used.

Model NO.	Type	Zoom	Focus
38-809036-02	Fixed Short Throw Lens	Fixed	Manual
38-809041-02	Fixed Long Throw Lens	Fixed	Manual
38-809042-02	Long Throw Zoom Lens	Motor Driven	Motor Driven
38-809037-02	Short Throw Zoom Lens I	Motor Driven	Motor Driven
38-809043-02	Short Throw Zoom Lens II	Fixed	Manual
38-809040-02	Semi-Long Throw Zoom Lens	Motor Driven	Motor Driven
38-809038-02	Standard Zoom Lens I	Motor Driven	Motor Driven
38-809039-02	Standard Zoom Lens II	Motor Driven	Motor Driven
38-809044-02	Standard Zoom Lens III	Motor Driven	Motor Driven

### NOTES ON LENS INSTALLATION

- Lens installation and replacement should be made by the qualified service personnel.
- Be sure to install the lens following this procedure precisely.
- Do not touch or remove any parts except the lens and related parts. It may result in malfunctions, electrical shock, fire hazard or other accidents.
- Before installing or replacing the lens, check that the Model No. of the Projection Lens matches to the projector.
- When moving or setting up the projector, be sure to replace the Lens Cover to protect the surface. And be careful not to hold or subject the lens to strong forces. It may damage the lens, cabinet, or mechanical parts.
- For details of the lens and installation, contact the sales dealer where you purchased the projector.

# LENS REPLACEMENT AND INSTALLATION PROCEDURE

NOTE : The installation procedure and needed parts for lens installation depend on the type of the Projection Lens. Check the Model No. of the Projection Lens and be sure to install or replace the lens following procedure below.

- 1 Remove Lens Cover. Remove 2 Screws A. Push part B and pull Upper Lens Cover up.  
(See Fig. 1.)

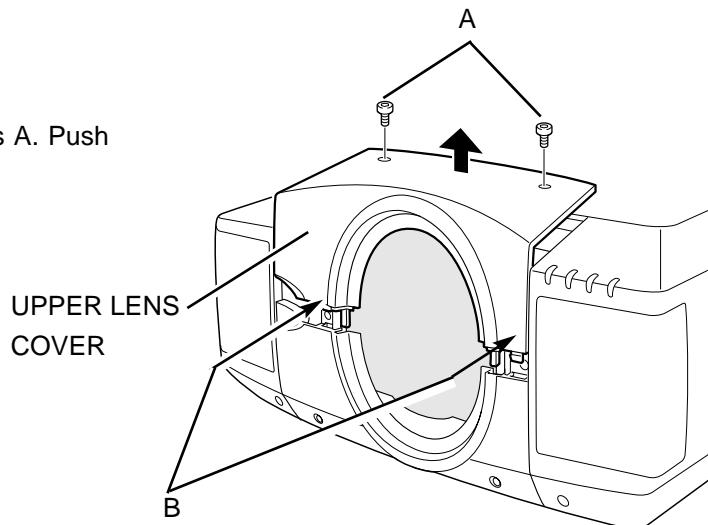


Fig-1

- 2 Remove 4 Screws C. Pull Lower Lens Cover toward front and remove. (See Fig. 2.)

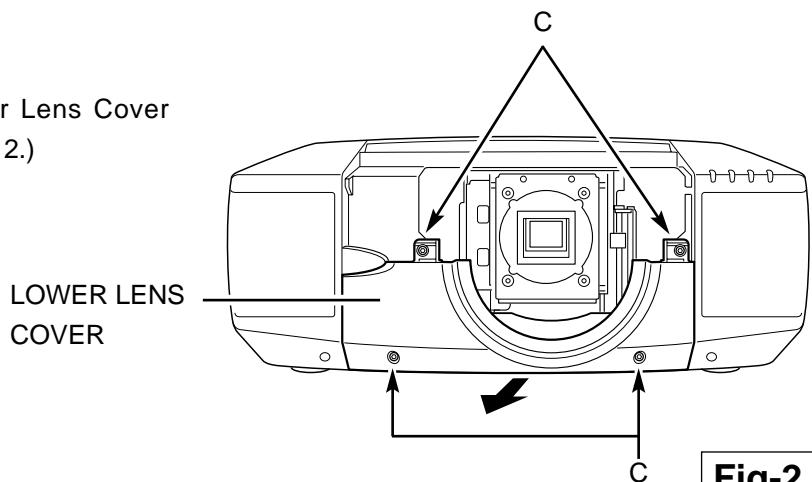


Fig-2

- 3 Remove 2 Screws D and Cover Plate on the back of Upper Lens Cover. (See Fig. 3.)

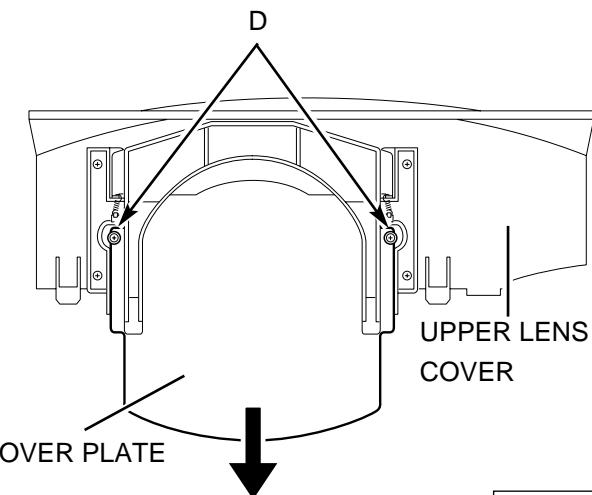
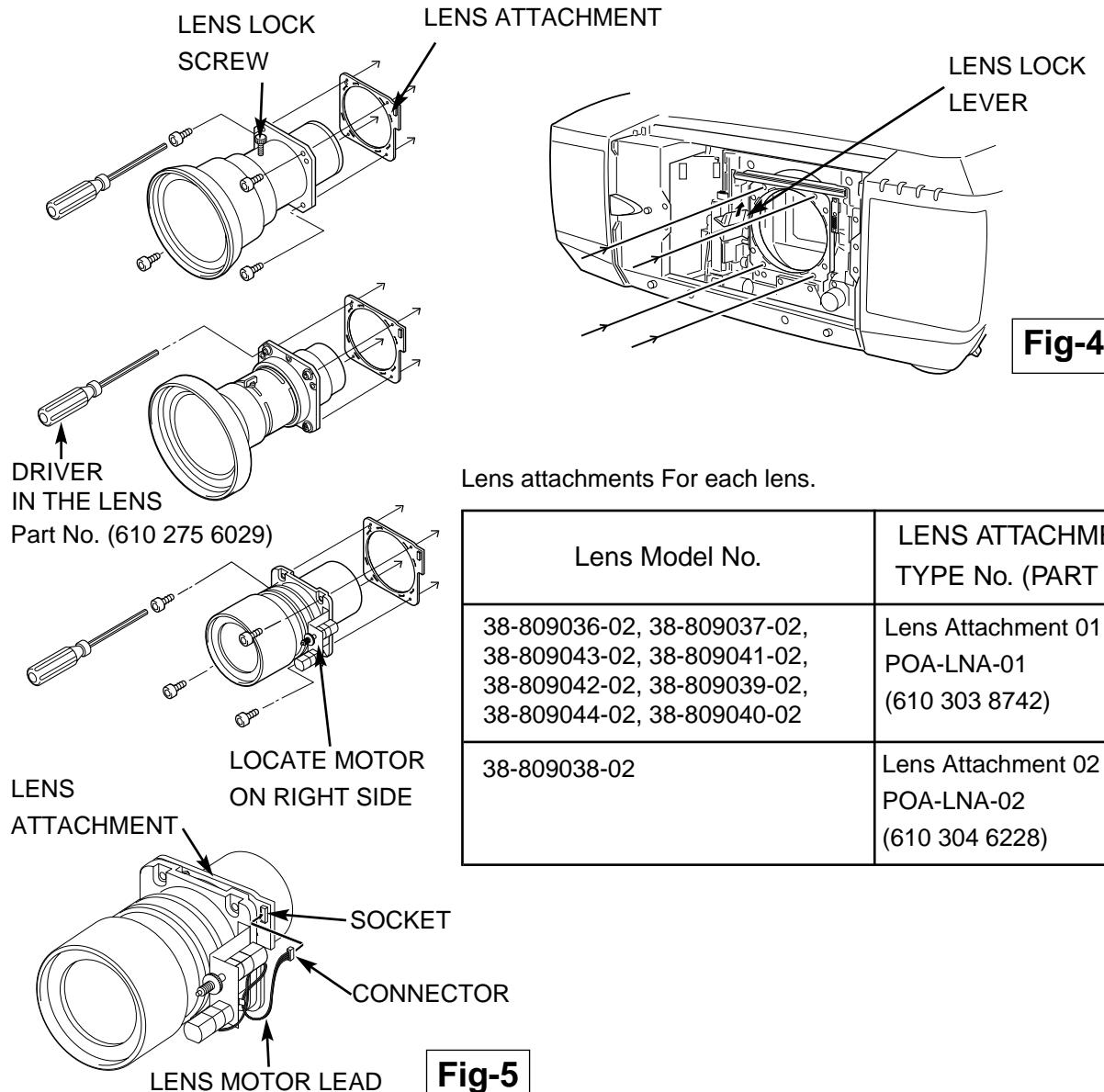
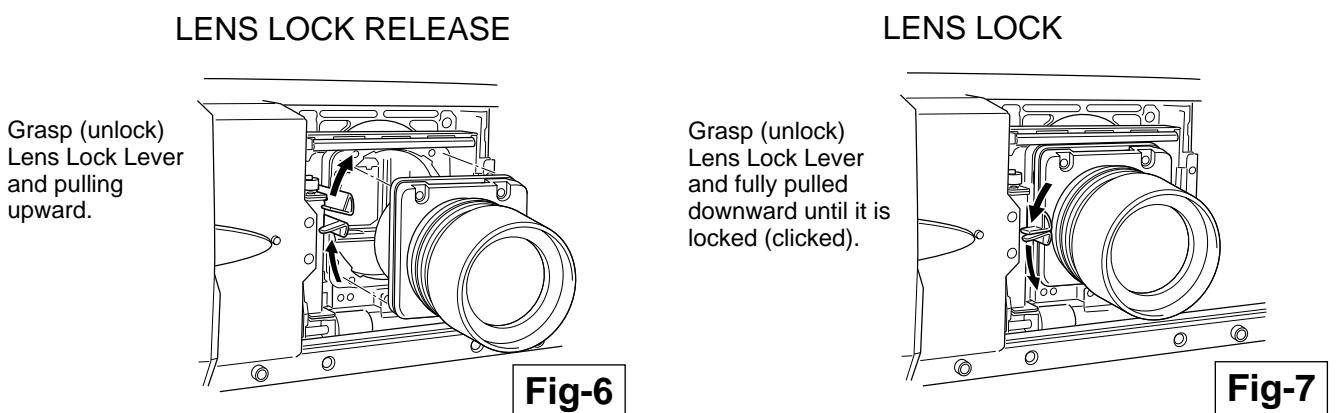


Fig-3

**4** Replace Lens Cap on the rear (mounting side) of Projection Lens and mount Lens on the lens attachment with 4 Screws. (Use screws attached on lens.)  
 Connect the Lens Motor Lead connector to the socket on the right-top of the lens attachment. (Motor Driven Lens only.) See Fig. 5.



**5** Grasp (release lock) the Lens Lock Lever and turn it fully upward. (See Fig. 6.)  
 Install the Lens into the projector. Grasp the Lens Lock Lever and turn the Lever fully downward until lever is Locked (clicked position) properly. (See Fig. 7.)  
 When installing the Motor Driven Lens, be sure to mount Lens Motor on right side. (See Fig. 4.)  
 After installing the lens, make sure the Lens is not loose and properly installed.



**6** This projector has 6 Light-Block Sheets. Use 2 Light-Block Sheets corresponding with lens. (Refer to the list below.) Use 1 Light-block Sheet for MODEL 38-809043-02  
 Set 2 Light-Block Sheets through the lens.  
 Make sure the shape of the Light-Block Sheets are correct and be sure to set them as shown in the Fig. 8.

NOTE:

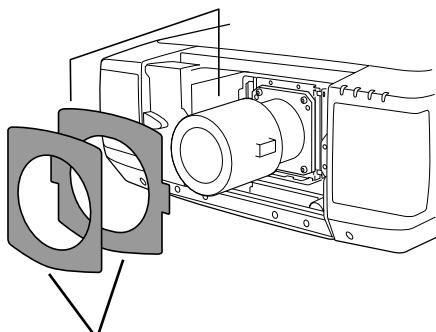
- Be sure to set each Light-Block Sheet as shown in Fig-8.
- Make sure the mark (TOP and BACK) on Light-Block Sheets are correct and set them properly.

Light-Block Sheets For each lens.

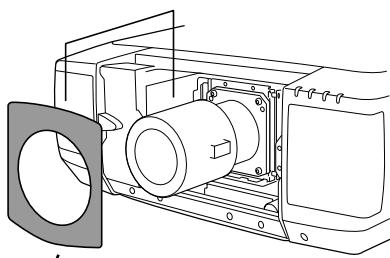
Lens Model No.	Type No. (Part No.)
38-809039-02	TYPE FA1 (610 285 8228)
	TYPE FA2 (610 285 8204)
38-809037-02, 38-809038-02 38-809040-02, 38-809042-02	TYPE FB1 (610 285 8211)
	TYPE FB2 (610 285 8198)
38-809036-02, 38-809041-02 38-809044-02	TYPE FC1 (610 284 2500)
	TYPE FC2 (610 284 2494)
38-809043-02	TYPE FB1 (610 285 8211)

MODEL 38-809043-02

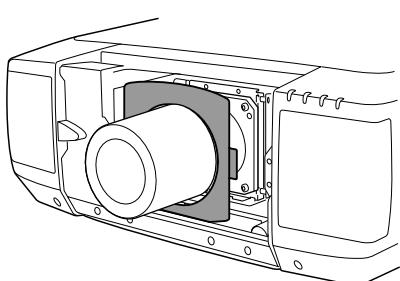
**Fig-8**



LIGHT BLOCK SHEETS  
 Make sure the sheet figures are  
 correct and put in proper position.



LIGHT BLOCK SHEET  
 Make sure the sheet figure is  
 correct and put in proper position.



- 7 Adjust focus of the Projection Lens. (38-809036-02, 38-809041-02 and 38-809043-02 only.) Set up the projector and project image on the screen. Loosen Focus Lens Lock Screw and rotate Projection Lens to obtain proper focus. After adjusting focus, be sure to lock Projection Lens with Focus Lens Lock Screw securely. (See Fig. 4.) Adjust focus of Projection Lens MODEL 38-809043-02, following Focus Adjustment on page 6.
- 8 Replace Lower Lens Cover. Slide Light-Block Sheets into the guide of Lower Lens Cover and set them in front of the flap. (See Fig. 9.) Fix Lower Lens Cover with 4 Screws C. (See Fig. 2.)
- 9 Replace Upper Lens Cover. Slide Light-Block Sheets into the guide of Upper Lens Cover and set them in front of the flap. (See Fig. 9.) Fix Upper Lens Cover with 2 Screws A. (See Fig. 1.)
- 10 Turn the projector on and operate Lens shift, Zoom and Focus fully to check Light-Block Sheets. If Light-Block Sheets interfere with those operations, check Light-Block Sheets are set properly.

Slide both upper sides of LIGHT BLOCK

Sheets in between ① and ②.

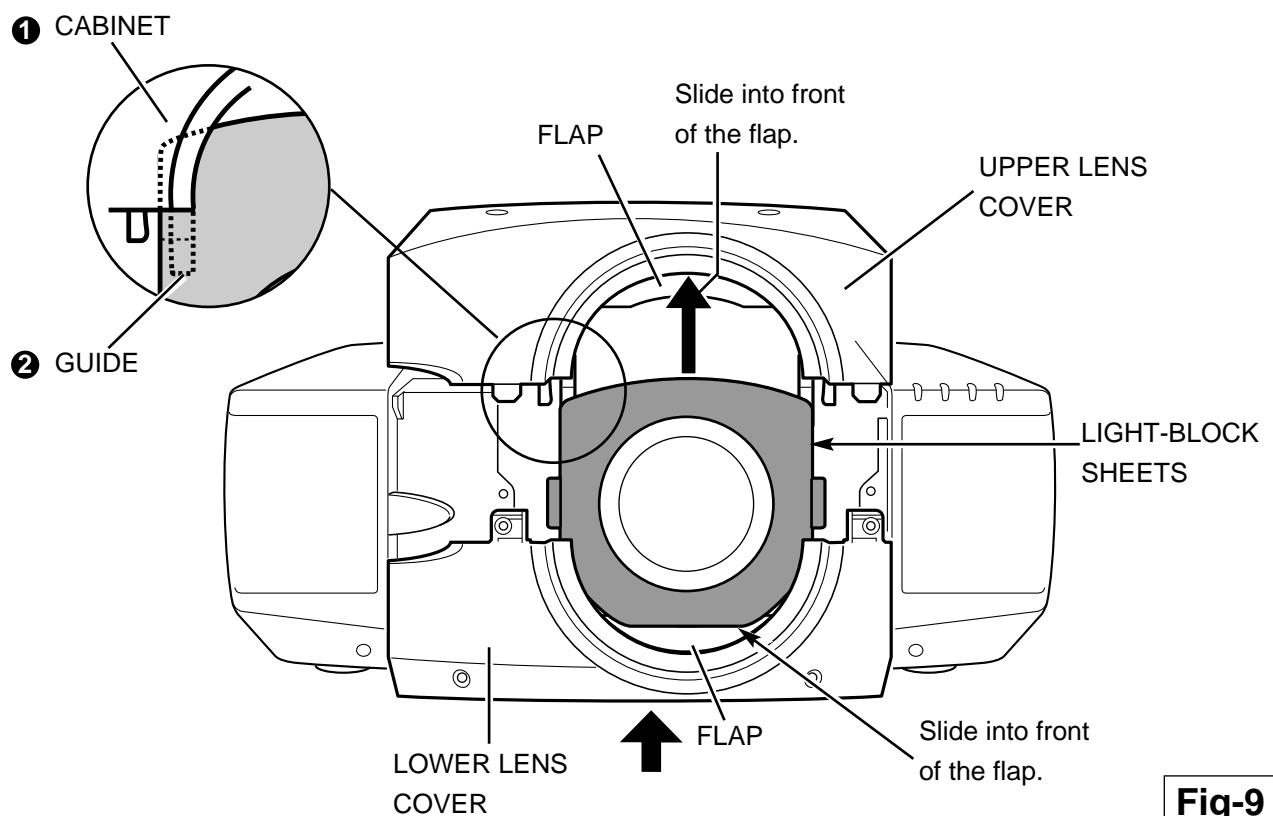


Fig-9

# FOCUS ADJUSTMENT (For Model 38-809043-02)

Set up the projector and project image on the screen.

1. Loosen the Focus Lock Screw on the projection lens.
2. Rotate the projection lens to obtain proper focus on center area of the screen.

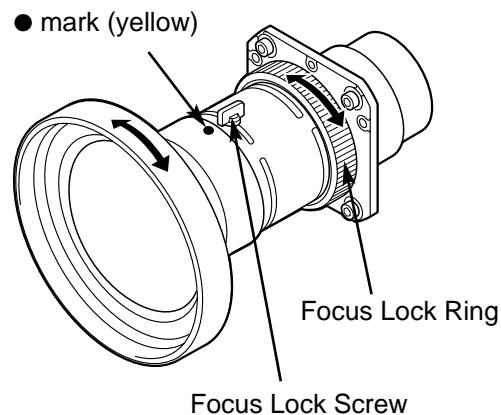
When the distance of the screen and lens is 1 meter, set ● mark (yellow) of the lens on Focus Lock Screw position.

3. Lock the Focus Lock Screw securely.

When proper focus is not observed at outer area of the screen, proceed following adjustments.

4. Loosen the Focus Lock Ring on the projection lens. (Turn the Lock Ring counter-clockwise.)
5. Rotate the lens to obtain proper focus on outer area of the screen.
6. Lock the Focus Lock Ring securely. (Turn the Lock Ring to clockwise.)

If proper focus is not observed over the entire screen, repeat above adjustments 1~ 6.



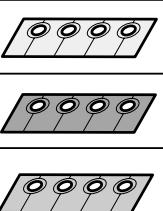
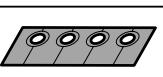
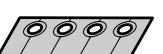
## Correcting the focus

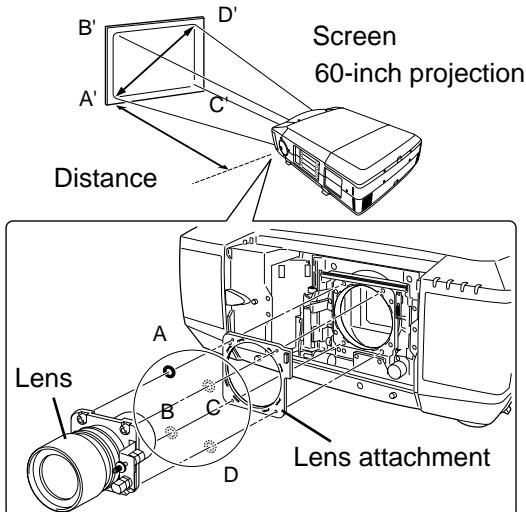
When the lens is attached to the projector and images are being projected onto the screen, the peripheral focus may be out of focus in some localized areas. If this happens, insert the accessory in between the lens attachment and the lens to correct the focus.

Inserting the spacers corrects the distance for best diagonal focus at the screen.

The corrected distance is determined by the thickness of the spacers that are used. As a guide, the distance is adjusted by approximately 30 mm for each 0.1-mm thickness of the spacers.

There are three types of spacers provided, and there are four of each spacer type. Use these spacers to correct the distance as required.

	Spacer "1" Color: Clear Thickness: 0.1 mm	Correction distance 30 mm/for 60-inch projection
	Spacer "2" Color: Black Thickness: 0.2 mm	Correction distance 60 mm/for 60-inch projection
	Spacer "3" Color: Cream Thickness: 0.3 mm	Correction distance 90 mm/for 60-inch projection



## BE SURE TO CHECK FOR SAFETY

After installing or replacing the lens, be sure to check the following for safety.



1. Check the lens is securely fixed with the screws.
2. Check no wiring is damaged or tangled on the gear of the lens motor or the other mechanical parts.
3. Check no part is missing, and no mounting part is loose.

Some parts are not used for installation or replacement. Keep these parts for later use.

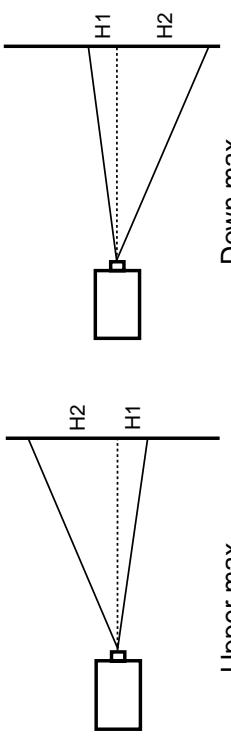
NOTE: Figures in this manual may differ from the actual product.

# SPECIFICATIONS (Throw distance and screen size, screen of lens shift.)

NOTE: Following table shows approximate measurement. Actual measurement depends on lens and projectors.

Model No.	Zoom	SCREEN SIZE (INCH) AND THROW DISTANCE (m)										LENS SHIFT/ CENTER RATIO			U/D (MAX) SIDE (MAX)				
		40	60	80	100	120	150	180	200	250	300	350	400	500	600	H1	H2	W1	W2
38-809039-02	MIN	1.9	3.0	4.1	5.2	6.3	7.9	9.6	10.7	13.4	16.1	18.9	21.6	27.1	32.5	0	10	4	6
	MAX	1.5	2.4	3.2	4.0	4.9	6.1	7.4	8.3	10.4	12.5	14.6	16.7	20.9	25.1				
38-809037-02	MIN	1.4	2.1	2.9	3.6	4.4	5.5	6.7	7.4	9.3	11.2	13.1	15.0	13.7	22.5	1	8	4	6
	MAX	1.1	1.7	2.3	2.9	3.4	4.3	5.2	5.8	7.2	8.6	10.1	11.5	14.4	17.3				
38-809042-02	MIN	5.1	7.5	10.0	12.5	14.9	18.6	22.3	24.8	31.0	37.1	43.3	49.5	61.8	74.2	1	8	4	6
	MAX	3.8	5.5	7.3	9.1	10.8	13.5	16.1	17.9	22.3	26.7	31.1	35.5	44.3	53.1				
38-809040-02	MIN	3.6	5.4	7.2	9.0	10.8	13.5	16.2	18.0	22.5	27.0	31.5	36.0	45.0	54.0	1	8	4	6
	MAX	2.9	4.3	5.7	7.1	8.5	10.5	12.6	14.0	17.5	21.0	34.4	27.9	34.9	41.8				
38-809038-02	MIN	2.3	3.5	4.6	5.8	7	8.8	10.6	11.8	14.8	17.8	20.8	23.8	29.7	35.7	0	10	4	6
	MAX	1.5	2.2	2.9	3.7	4.4	5.6	6.7	7.4	9.3	11.2	13	14.9	18.6	22.4				
38-809044-02	MIN	---	---	---	7.1	8.6	10.7	12.9	14.4	18.0	21.6	25.3	28.9	36.1	43.4	0	10	4	6
	MAX	---	---	---	5.2	6.3	7.9	9.5	10.6	13.3	16.0	18.7	21.4	26.8	32.2				
38-809036-02	NONE	0.9	1.4	1.9	2.4	2.9	3.6	4.4	4.9	6.1	7.4	8.6	9.9	12.3	14.8	1	8	4	6
38-809041-02	NONE	5.6	8.4	11.2	14.0	16.8	21.0	25.3	28.1	35.1	42.1	49.2	56.2	70.3	84.3	1	8	4	6
38-809043-02	NONE	0.6	0.9	1.3	1.6	1.9	2.4	2.9	3.3	4.1	4.9	5.8	6.6	8.3	9.9	1	1	1	1

LENS SHIFT (UP/DOWN)



LENS SHIFT (SIDE TO SIDE)

