

This user manual is provided as a free service by FixYourDLP.com. FixYourDLP is in no way responsible for the content of this manual, nor do we guarantee its accuracy. FixYourDLP does not make any claim of copyright and all copyrights remain the property of their respective owners.

About FixYourDLP.com

FixYourDLP.com (http://www.fixyourdlp.com) is the World's #1 resource for media product news, reviews, do-it-yourself guides, and manuals.

Informational Blog: http://www.fixyourdlp.com Video Guides: http://www.fixyourdlp.com/guides User Forums: http://www.fixyourdlp.com/forum

FixYourDLP's Fight Against Counterfeit Lamps: http://www.fixyourdlp.com/counterfeits

Sponsors:

RecycleYourLamp.org – Free lamp recycling services for used lamps: http://www.recycleyourlamp.org

Lamp Research - The trusted 3rd party lamp research company: http://www.lampresearch.com

Discount-Merchant.com – The worlds largest lamp distributor: http://www.discount-merchant.com





Important Information

Safety Cautions

Precautions

Please read this manual carefully before using your NEC LT20 Projector and keep the manual handy for future reference. Your serial number is located on the bottom of your projector. Record it here:

CAUTION



To turn off main power, be sure to remove the plug from power outlet. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.

CAUTION



TO PREVENT SHOCK, DO NOT OPEN THE CABINET. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED NEC SERVICE PERSONNEL.



This symbol warns the user that uninsulated voltage within the unit may be sufficient to cause electrical shock. Therefore, it is dangerous to make any kind of contact with any part inside of the unit.



This symbol alerts the user that important information concerning the operation and maintenance of this unit has been provided.

The information should be read carefully to avoid problems.

WARNING: TO PREVENT FIRE OR SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. DO NOT USE THIS UNIT'S PLUG WITH AN EXTENSION CORD OR IN AN OUTLET UNLESS ALL THE PRONGS CAN BE FULLY INSERTED. DO NOT OPEN THE CABINET. THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. ALL SERVICING MUST

BE DONE BY QUALIFIED NEC SERVICE PERSONNEL.

DOC Compliance Notice (for Canada only)

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

FixYourDLP.com Sponsered by M Discount-Merchant.com (800) 281-8860 THE TRUSTED SOURCE FOR PROJECTOR LAMPS AND ACCESSORIES

WARNING TO CALIFORNIA RESIDENTS:

Handling the cables supplied with this product, will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. Wash hands after handling.

RF Interference (for USA only)

WARNING

The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by NEC Solutions (America), Inc. in this manual. Failure to comply with this government regulation could void your right to operate this equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

For UK only: In UK, a BS approved power cable with moulded plug has a Black (five Amps) fuse installed for use with this equipment. If a power cable is not supplied with this equipment please contact your supplier.

Important Safeguards

These safety instructions are to ensure the long life of your projector and to prevent fire and shock. Please read them carefully and heed all warnings.

Installation

- 1. For best results, use your projector in a darkened room.
- 2. Place the projector on a flat, level surface in a dry area away from dust and moisture.
- 3. Do not place your projector in direct sunlight, near heaters or heat radiating appliances.
- 4. Exposure to direct sunlight, smoke or steam can harm internal components.
- 5. Handle your projector carefully. Dropping or jarring can damage internal components.
- 6. Do not place heavy objects on top of the projector.



Fire and Shock Precautions

- 1. Ensure that there is sufficient ventilation and that vents are unobstructed to prevent the build-up of heat inside your projector. Allow at least 12 inches (30 cm) of space between your projector and a wall.
- 2. Prevent foreign objects such as paper clips and bits of paper from falling into your projector.

Do not attempt to retrieve any objects that might fall into your projector. Do not insert any metal objects such as a wire or screwdriver into your projector. If something should fall into your projector, disconnect it immediately and have the object removed by a qualified NEC service personnel.

- 3. Do not place any liquids on top of your projector.
- 4. Do not look into the lens while the projector is on. Serious damage to your eyes could result.
- 5. Keep any items such as magnifying glass out of the light path of the projector. The light being projected from the lens is extensive, therefore any kind of abnormal objects that can redirect light coming out of the lens, can cause unpredictable outcome such as fire or injury to the eyes.
- 6. Do not cover the lens with the supplied lens cap or equivalent while the projector is on. Doing so can lead to melting of the cap and possibly burning your hands due to the heat emitted from the light output.
- 7. The projector is designed to operate on a power supply of 100-240V AC 50/60 Hz. Ensure that your power supply fits this requirement before attempting to use your projector.
- 8. Handle the power cable carefully and avoid excessive bending.

A damaged cord can cause electric shock or fire.

- 9. If the projector is not to be used for an extended period of time, disconnect the plug from the power outlet.
- 10. Do not touch the power plug during a thunderstorm. Doing so can cause electrical shock or fire.
- 11. Do not handle the power plug with wet hands.



Table of Contents

Table of Contents	1
Usage Notice	2
Precautions	2
Introduction	1
Product Features	4
What's in the Box?	5
Package Overview	5
Main Unit	6
Control Panel	7
Connection Ports	8
Remote Control	9
Installation)
Connecting the Projector 10	2
Powering On/Off the Projector1	1
Powering On the Projector1	1
Powering Off the projector12	2
Warning Indicator12	2
Adjusting the Projected Image 13	3
Adjusting the Projector Image Height13	3
Adjusting the Projector Zoom / Focus14	4
Adjusting Projected Image Size 14	4
User Controls	5
Control Panel & Remote Control 15	5
On-Screen Menus 17	7
How to operate	7
Language	9
Image All	9
Image Computer	1
Image Video	2
Setup	3
Appendices	5 5
Discovering the lamp	3 9 2
TravelCare Guide A-1	

Usage Notice

Precautions

Follow all warnings, precautions and maintenance as recommended in this user's guide to maximize the life of your unit.

Warning- Do not look into the projector's lens when the lamp is on. The bright light may hurt your eyes.

- **Warning-** To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.
- **Warning-** Please do not open or disassemble the projector as this may cause electric shock.
- **Warning-** When changing the lamp, please allow unit to cool down, and follow all changing instructions.
- **Warning-** This product will detect the life of the lamp itself. Please be sure to change the lamp when it shows warning messages.
- **Warning-** Reset the "Clear lamp hour" function from the On-Screen Menu "Setup" menu after replacing the lamp module (refer to page 24).
- **Warning-** When switching the projector off, please ensure the projector completes its cooling cycle before disconnecting power.
- **Warning-** Turn on the projector first and then the signal sources.
- **Warning-** Do not use lens cap when projector is in operation.

Warning- Do not place the projector on its side when the lamp is turned on. Doing so may cause damage to the HE TRUSTED SOURCE FOP projector: CTOR LAMPS AND ACCESSORIES

Warning- The tilt angle of the projector should not exceed 8 degrees, otherwise the lamp life could decrease dramatically.

FixYourDLP.com

Usage Notice

Warning-When the lamp reaches the end of its life, it will burn out and may make a loud popping sound. If this happens, the projector will not turn back on until the lamp module has been replaced. To replace the lamp, follow the procedures listed under "Replacing the Lamp".

Do:

- * Turn off the projector before cleaning.
- Use a soft cloth moistened with mild detergent to clean the display housing.
- Disconnect the power plug from AC outlet if the projector is not being used for a long period of time.

Don't:

- Block the slots and openings on the projector provided for ventilation.
- Use abrasive cleaners, waxes or solvents to clean the projector.
- Use under the following conditions:
 - In extremely hot, cold or humid environments.
 - In areas susceptible to excessive dust and dirt.
 - Near any appliance that generates a strong magnetic field.
 - Place in direct sunlight.





Product Features

This product is an XGA single chip 0.7'' DLPTM projector. Outstanding features include:

- True XGA, 1024 x 768 addressable pixels
- ◆ Single chip DLP[™] technology
- NTSC/NTSC4.43/PAL/PAL-M/PAL-N/SECAM, Component (480i/p, 576i/p) and HDTV compatible
- Full function remote control
- User friendly multilingual on-screen menus
- Advanced digital keystone correction and high quality full screen image scaling
- User friendly control panel
- SXGA compression and XGA, VGA, SVGA re-sizing
- Mac compatible



What's in the Box?

This projector comes with all the items shown below. Check to make sure your unit is complete. Contact your dealer *immediately if anything is missing.*







Projector with lens cap

Power Cord 1.8m

VGA Cable 1.8m



CAUTION: Be sure to put the projector in the **soft case** with the lens upward so as not to damage the lens.



1.8m

Composite Video Cable



Remote Control



Soft Case





om (800) 281-8860

Documents :

User's Guide (CD)

2 x Battery

- **Q**uick Start Card
- Important Information Warranty Document





... English 5

Product Overview

Main Unit









Zoom Lever 1.

Focus Ring 2.

Focus Ring Zoom Lensant. COM (800) 281-8860 3. Elevator Foot Elevator Button

6

- 6. Remote Sensor
- Control Panel 7.
- **Connection Ports** 8.
- 9. AC Inlet



THE

Control Panel



- 1. Lamp Indicator LED
- 2. Status Indicator LED
- 3. Power Indicator LED
- 4. Enter
- 5. Keystone Correction
- 6. Exit
- 7. Source
- 8. On/Standby
- 9. Four Directional Select Keys
- 10. Menu
- 11. Auto Adjustment





Connection Ports



- Kensington[™] Lock Port For Service Use Only 1.
- 2.
- 3. S-Video Input Connector
- Composite Video Input Connector 4.
- VGA Connector (PC Analog Signal/HDTV/Component Video 5. Input)
- Remote Sensor 6.
- AC Inlet 7.



Remote Control



- 1. IR LEDS
- 2. Auto Adjustment
- 3. Power
- 4. Keystone Correction
- 5. Exit
- 6. Aspect Ratio
- 7. Freeze
- 8. Source
- 9. Four Directional Select Keys
- 10. Menu
- 11. Enter
- 12. Picture Mute

iscount-Merchant.com (800) 281-8860 THE TRUSTED SOURCE FOR PROJECTOR LAMPS AND ACCESSORIES

FixYourDLP.com



Connecting the Projector



English ... 10

Powering On/Off the Projector

Powering On the Projector

- **1.** Remove the lens cap.
- **2.** Ensure that the power cord and signal cable are securely connected. The Power LED will turn **orange**.
- 3. Turn on the lamp by pressing "On/Standby" button on the control panel.

 And the Power LED will flash green.
 The startup screen will display for 20 seconds and the Power LED will turn green.
- **4.** Turn on your source (computer, notebook, video player, etc.). The projector will detect your source automatically.
- If the screen displays "No Input", please make sure the signal cables are securely connected.
- If you connect multiple sources at the same time, use the "Source" button on the remote control or control panel to select your desired source.





Powering Off the Projector

- 1. Press the "On/Standby" button to turn off the projector lamp, you will see a message "**Power Off**" on the on-screen display.
- 2. Press the "On/Standby" button again to confirm.

Otherwise the message will disappear after 5 seconds.

3. The cooling fans continue to operate for about **100** seconds for cooling cycle and the Power LED will **flash orange**. When the light **stops** flashing and **turns orange**, the projector has entered standby mode.

If you wish to turn the projector back on, you must wait until the projector has completed the cooling cycle and has entered standby mode. Once in standby mode, simply press "On/Standby" button to restart the projector.

- **4.** Disconnect the power cord from the electrical outlet and the projector.
- **5.** Do not turn on the projector immediately following a power off procedure.

Warning Indicator

- When the "LAMP" indicator lights solid red, the projector will automatically shut itself down. Please contact your local reseller or service center.
- When the "STATUS" indicator lights solid red, it indicates the projector has been overheated. You will see a message "Projector Overheated" on the on-screen display. The projector will automatically shut itself down. Under normal conditions, the projector can be switched on

Under normal conditions, the projector can be switched on again after it has cooled down. If the problem persists, you should contact your local dealer or our service center.

When the "STATUS" indicator **flashes red** for about **10** seconds, you will see a message "The cooling fan has stopped" on the on-screen display. Please contact your local dealer or our service center.

English ... 12

FixYourDLP.com

Adjusting the Projected Image

Adjusting the Projector Image Height

The projector is equipped with an elevator foot for adjusting the image height.

To raise the image:

- **1.** Press the elevator button **0**.
- Raise the image to the desired height angle 2, then release the button to lock the elevator foot into position.
- **3.** Use **3** to fine-tune the display angle.

To lower the image:

- **1.** Press the elevator button.
- **2.** Lower the image, then release the button to lock the elevator foot into position.
- **3.** Use **3** to fine-tune the display angle.



Adjusting the Projector Zoom/Focus

You may turn the zoom lever to zoom in or out. To focus the image, rotate the focus ring until the image is clear. The projector will focus at distances from 4.9 to 32.8 feet (1.5 to 10.0 meters).



Control Panel & Remote Control

There are two ways for you to control the functions: Remote Control and Control Panel.

Control Panel

Remote Control





Using the Control Panel

On/Standby 💽

• Refer to the "Powering On/Off the Projector" section on pages 11-12.

Source 🕨

Press "Source" to choose RGB, Component, HDTV, Composite video and S-video sources.

Menu

ixYourDLP.com

▶ Press "Menu" to launch the on-screen menu (OSM).

Keystone ▲ △ / ▼ □

Adjusts image distortion caused by tilting the projector (±8 degrees).

Use \land \checkmark \checkmark \checkmark to select items or make adjustments to

Four Directional Select Keys

D SOURCE FOR PROJECTOR LAMPS AND ACCESSORIES

• Confirm your selection of items.



AUTO ADJ. (Auto adjustment) ◀

• Automatically synchronizes the projector to the input source.

Exit

• Exit the OSM menu.

Using the Remote Control

Power

 Refer to the "Powering On/Off the Projector" section on pages 11-12.

AUTO ADJ. (Auto adjustment)

• Automatically synchronizes the projector to the input source.

Keystone

Adjusts image distortion caused by tilting the projector (±8 degrees). Press the gyro-wheel first, and then slip up or down.

Source

Press "Source" to choose RGB, Component, HDTV, Composite video and S-video sources.

PIC-MUTE (Picture Mute)

Press "PIC-MUTE" to hide image, press again to restore display of the image.

Freeze

▶ Press "Freeze" to pause the screen image.

Aspect Ratio

• Selects the desired aspect ratio.

Menu

Enter

▶ Press "Menu" to launch the on-screen display menu.

Four Directional Select Keys

Use ▲ ▼ ◀ ▶ to select items or make adjustments to your selection.

FixYourDLP.com

English ... 16

• Confirm your selection of items.

iscount-Mexit Chant.com (800) 281-8860



"..." should be pressed, the keystone could be adjust.

On-Screen Menus

The Projector has multilingual On-Screen menus that allow you to make image adjustments and change a variety of settings. The projector will automatically detect the source.

How to operate

- **1.** To open the OSM menu, press "Menu" on the Remote Control or Control Panel.
- Use ▲ ▼ keys to select the desired item and adjust the settings by ◀ ▶ key.
- **4.** Select the next item to be adjusted in the sub menu and adjust as described above.
- **5.** Press "Exit" to confirm, and the screen will return to the main menu.
- **6.** To exit, press "Exit" again. The OSM menu will close and the projector will automatically save the new settings.



17 ... English

Language		17	
English			
Deutsch			
Français			
Italiano			
Español			
Português			
日本語			
Svenska			
简体中文			
한국어			
Русский			
00 Move	oo Select		
			04 700 0011

Language

Language

Choose the multilingual OSM menu . Use the \land or \checkmark key to select your preferred language.

Press "Enter" to finalize the selection.





FixYourDLP.com

Image (All)

Brightness

Adjust the brightness of the image.

- Press the **d** to darken image.
- ▶ Press the ▶ to lighten the image.

Contrast

The contrast controls the degree of difference between the lightest and darkest parts of the picture. Adjusting the contrast changes the amount of black and white in the image.

- \blacktriangleright Press the \blacktriangleright to increase the contrast.

White Peaking

White peaking can be incrementally adjusted between 0 and 10. Click on the slider bar to adjust. The default value for computer is 10. The default value for video is 2. If the default value is changed, the display mode will change to user mode automatically.

- Setting 10 will maximize brightness and contrast.
- Setting 0 will maximize color reproduction quality.

Color Temperature

Adjust the color temperature. At higher temperature, the screen looks colder; at lower temperature, the screen looks warmer.

Keystoner PROJECTOR LAMPS AND ACCESSORIES

Adjust image distortion caused by tilting projector. (±8 degrees) **Aspect Ratio**

Use this function to choose your desired aspect ratio.



Image (All)			67		
Brightness					60
Contrast					50
White Peaking					5
Color Temperature					2
Keystone					50
Aspect Ratio			4:3		
Display mode			Video		
Reset			No		
00 Move	00	Select			
Computer				1024x76	8 60Hz

Image (All)

- ▶ 4:3 : The input source will be scaled to fit the projection-screen.
- 16:9 : The input source will be scaled to fit the width of the screen.

Display Mode

There are many factory presets optimized for various types of images.

- Presentation : For presentation.
- Video : For home theater.
- Game : For game.
- ▶ sRGB : For PC standard color.
- User : Memorize user's settings.

Reset

Choose "Yes" then "Enter" pressed, the display parameters on this menu will return to their factory default settings.





Image Computer (*Computer mode*)

Auto Adjust

The projector automatically adjusts clock, phase, horizontal and vertical. With most signal sources, Auto Adjust provides the best results.

Clock

"Clock" changes the display data frequency to match the frequency of your computer's graphic card. If you experience a vertical flickering bar, use this function to make an adjustment.

Phase

"Phase" synchronizes the signal timing of the display with the graphic card. If you experience an unstable or flickering image, use this function to correct it.

Horizontal Position

- ▶ Press the ▶ to move the image right.

Vertical Position

- ▶ Press the ▶ to move the image up.

Reset

FixYourDLP.com

Choose "Yes" then "Enter" pressed, the display parameters on this THE TRUSTED SOMENU will return to their factory default settings. CESSORIES



Image (Video)		67	()
Color			50
Sharpness			50
Hue			50
Reset		No	
00 Move	oo Select		
S-video		640x4	80 60Hz

Image Video (Video mode)

Color

Adjusts a video image from black and white to fully saturated color.

- ▶ Press the ▶ to increase the amount of color in the image.

Sharpness

Adjusts the sharpness of the image.

- ▶ Press the ▶ to increase the sharpness.

Hue

Adjusts the color balance of red and green.

- ▶ Press the ▶ to increase the amount of red in the image.

Reset

Choose "Yes" then "Enter" pressed, the display parameters on this menu will return to their factory default settings.



iscount-Merchant.com (800) 281-8860 THE TRUSTED SOURCE FOR PROJECTOR LAMPS AND ACCESSORIES



Setup

Menu Location

Choose the menu location on the display screen.

Orientation

Front-Desktop

The factory default setting.

Rear-Desktop

When you select this function, the projector reverses the image so you can project behind a translucent screen.

Lamp Hour

Display the cumulative lamp operating time. The lamp hour in OSM is calculated by "Normal mode", when "ECO mode" is selected, the system will convert from "ECO mode" lamp hour to "Normal mode".

Signal Type

Select signal type RGB or Video sources.

Search Signal Lock

When this function is turned off, the projector will search for other signals if the current input signal is lost. When this function is turned on, it will search specified connection port.

Fan Modeant.CON

Choose "High" to turn on High Altitude mode. Operates the fans at full speed continuously to allow for proper high altitude cooling of the projector. Choose "Normal" to return standard mode.

800



Remark :

The formula is : "ECO mode" lamp hours x 0.67 = "Normal mode" lamp hours.



Setup		
Menu Location		
Orientation		
Lamp hour		50
Signal Type		RGB
Search signal lock		Off
Fan mode		Normal
Lamp mode		Normal
Lamp Reminding		Off
Clear Lamp Hour		No
Reset		No
Reset (All data)		No
00 Move	oo Select	
Computer		1024x768 60Hz

Setup

Lamp Mode

Choose "ECO" to dim the projector lamp which will lower power consumption and extend the lamp life by up to 150%. Choose "Normal" to return standard mode.

Lamp Reminding

Choose this function to show or to hide the warning message when the changing lamp message is displayed. The message will show up 100 hours before end of life.

Clear Lamp Hour

Turns the lamp hour counter to 0 hours.

Reset

Choose "Yes" then "Enter" pressed, the display parameters (except for Lamp Hour) on this menu will return to their factory default settings.

Reset (All)

Choose "Yes" then "Enter" pressed, the display parameters (except for Lamp Hour) on all menus will return to their factory default settings.

iscount-Merchant.com (800) 281-8860 THE TRUSTED SOURCE FOR PROJECTOR LAMPS AND ACCESSORIES

FixYourDLP.com

Troubleshooting

If you experience trouble with the projector, refer to the following information. If the problem persists, please contact your local reseller or service center.

Problem: No image appears on-screen.

- Ensure all the cables and power connections are correctly and securely connected as described in the "Installation" section.
- Ensure the pins of connectors are not crooked or broken.
- Check if the projection lamp has been securely installed. Please refer to the "Replacing the lamp" section.
- Make sure you have removed the lens cap and the projector is switched on.
- Press "Picture Mute" button to make sure the image has not been turned off temporarily.

Problem: Partial, scrolling or incorrectly displayed image.

- Press the "AUTO ADJ." button on the Remote Control or Control Panel.
- If you use a PC:

ixYourDLP.co

If the resolution of your computer is higher than 1024×768 . Follow the steps outlined below to reset the resolution.

For Windows 3.x:

- In the Windows Program Manager, click the "Windows Setup" icon in the Main group.
- 2. Verify that your display resolution setting is less than or equal to 1024 x 768.

For Windows 95,98,2000,XP:

- 1. Open "My Computer" icon, the "Control Panel" folder, and then double click on the "Display" icon.
- **2.** Select the "Setting" tab.
- In the "Desktop Area" you will find the resolution setting.

Verify that the resolution setting is less than or equal to 1024 x

768 resolution AMPS AND ACCESSORIES

> If the projector is still not projecting the whole image, you will also need to change the monitor display you are using. Refer to the following steps.





- **4.** Follow the above steps 1-2. Click on the "Advanced Properties" button.
- 5. Select the "Change" button under the "Monitor" tab.
- 6. Click on "Show all devices". Then select "Standard monitor types" under the "Manufacturers" box; choose the resolution mode you need under the "Models" box.
- 7. Verify that the resolution setting of the monitor display is less than or equal to 1024×768 .
- If you are using a Notebook PC:
 - **1.** You are required to implement the above steps of resolution setting of the computer first.
 - **2.** Switch the Notebook PC display to the "external display only" or "CRT only" mode.
- If you experience difficulty in changing resolutions or your monitor freezes, restart all the equipment and the projector.

Problem: The screen of the Notebook or PowerBook computer is not displaying your presentation.

- If you are using a Notebook PC: Some Notebook PCs may deactivate their screens when a second display device is in use. Refer to your computer's documentation for information on how to reactivate the monitor display.
- If you are using an Apple PowerBook: In Control Panels, open the PowerBook Display to select Video Mirroring "On".

Problem: Image is unstable or flickering

- Use "Phase" to correct it. Refer to page 21.
- Change the monitor color setting from your computer.

Problem: Image has vertical flickering bar

- Use "Clock" to make an adjustment. Refer to page 21.
- Check and reconfigure the display mode of your graphic card to make it compatible with the projector. Refer to page 25.

Problem: Image is out of focus (800) 281-8860

TRUSTED SolAdjusts the Focus Ring on the projector lens. Refer to page 14.

Make sure the projection-screen is between the required distance 4.9 to 32.8 feet (1.5 to 10.0 meters) from the projector.

FixYourDLP.com

Problem: The image is stretched when displaying 16:9 DVD.

The projector automatically detects 16:9 DVD and adjusts the aspect ratio by digitizing to full screen with 4:3 default setting.

If the image is still stretched, you will also need to adjust the aspect ratio by referring to the following:

- Please select 4:3 aspect ratio type on your DVD player if you are playing a 16:9 DVD.
- If you can't select 4:3 aspect ratio type on your DVD player, please select 4:3 aspect ratio in the on-screen menu.

Problem: Lamp burns out or makes a popping sound

▶ When the lamp reaches its end of life, it will burn out and may make a loud popping sound. If this happens, the projector will not turn on until the lamp module has been replaced. To replace the lamp, follow the procedures in the "Replacing the Lamp". See page 29.

Message	Power LED		Status	Lamp
Messuge	Orange Green		LED	LED
Standby State	¥	\circ	0	0
(Input power cord)	\mathcal{K}	0	0	0
Lamp lighting	0	Flashing	0	0
Power On	0	ф.	0	0
Power Off (Cooling)	Flashing	Ō	0	0
Error (Lamp failed)	Flashing	0	0	Flashing
Error	Flaching	\bigcirc	Flaching	0
(Fan lock failed)	Plashing	0	Flashing	0
Error (Overheated)	Flashing	0	Ņ.	0
Error	*	\circ	\sim	Ķ
(Lamp no strike)	×	0	0	*

Problem: LED lighting message



Steady light => - 🄆 No light => 🔿

YourDLP.com

Problem: Message Reminders

"The lamp has reached the end of its usable life. Please replace the lamp." will be shown about 10 seconds, when lamp is nearing end of life.

- "Projector Overheated." will be shown when the system temperature is too high.
- " The cooling fan has stopped." will be shown when the fan is out of order.
 27 ... English

Replacing the lamp

The projector will detect the lamp life itself. It will show you a warning message "The lamp has reached the end of its usable life. Please replace the lamp." When you see this message, change the lamp as soon as possible.

Make sure the projector has been cooled down for at least 60 minutes before changing the lamp.



Warning: Lamp

English ... 28

compartment is hot! Allow it to cool down before changing lamp!

Specifications

- Single Chip DLP[™] Technology by Texas Instruments
- 1024 pixels(H) X 768 lines(V)
- 16.7M colors
- F/2.7~2.88 f=28.43~32.75mm with 1.15x Manual zoom lens
- 31.7 to 246.1 inches (0.81 to 6.25 meters) Diagonal
- 4.92 to 32.8 feet (1.5 to10.0 meters)
- NTSC/NTSC 4.43/PAL/PAL-M/PAL-N/SECAM, Component and HDTV compatible
- Composite video & S-Video capability
- 15kHz~80kHz horizontal scan
- 50Hz~85Hz vertical refresh
- Universal AC input 100-240V ; Input Frequency 50-60Hz
- 200W
- 2.3-1.0A (100-240V AC)
- Power: AC power input socket
- Computer Input: 1x 15-pin D-Sub VGA for analog/component and HDTV signal
- Video Input:
 1x Composite video RCA input
 - 1x S-Video input
- 2.2 lbs (1 kg)
- 7.9 x 2.2 x 5.9 inches (200 x 56 x 150.5 mm)
- Operating Temperature: 41~95°F (5~ 35°C)
 Humidity: 80% maximum (Non-condensing)
- Storage Temperature: -4~140°F (-20~60°C)
 Humidity: 80% maximum (Non-condensing)

FCC, CE, VCCI, UL, cUL, TÜV-GS, S-TUV(Japan), PSE(Japan), CB Reportes AND ACCESSORIES

Weight Dimensions (W x H x D) Environmental

Light Valve

Number of Pixels

Displayable Color

Projection Distance

Video Compatibility

H. Frequency V. Frequency

Power Supply

Input Current

I/O Connectors

Power Consumption

Projection Screen Size (Diag.)

Projection Lens

FixYourDLP.com

THE TRUSTED SOU



Compatibility Modes

		(ANALOG)		
Mode	Resolution	V.Frequency (Hz)	H.Frequency (kHz)	
VESA VGA	640 x 350	70	31.5	
VESA VGA	640 x 350	85	37.9	
VESA VGA	640 x 400	85	37.9	
VESA VGA	640 x 480	60	31.5	
VESA VGA	640 x 480	72	37.9	
VESA VGA	640 x 480	75	37.5	
VESA VGA	640 x 480	85	43.3	
VESA VGA	720 x 400	70	31.5	
VESA VGA	720 x 400	85	37.9	
SVGA	800 × 600	56	35.2	
SVGA	800 × 600	60	37.9	
SVGA	800 × 600	72	48.1	
SVGA	800 x 600	75	46.9	
SVGA	800 × 600	85	53.7	
VESA XGA	1024 x 768	60	48.4	
VESA XGA	1024 x 768	70	56.5	
VESA XGA	1024 x 768	75	60.0	
VESA XGA	1024 x 768	85	68.7	
* VESA SXGA	1152 x 864	70	63.8	
* VESA SXGA	1152 x 864	75	67.5	
* VESA SXGA	1152 x 864	85	77.1	
* VESA SXGA	1280 x 960	60	60.0	
* VESA SXGA	1280 x 960	75	75.0	
* VESA SXGA	1280 x 1024	60	63.98	
* VESA SXGA	1280 x 1024	75	79.98	
* VESA SXGA+	1400 x 1050	60	63.98	
MAC 16"	832 x 624	74.55	49.725	
MAC 19"	1024 x 768	75	60.24	
* MAC	1152 x 870	75.06	68.68	8860
MAC G4	640 x 480		31,35	RIES
i Mac DV	1024 x 768	75	60.0	
* i Mac DV	1152 x 870	75	68.49	
* i Mac DV	1280 x 960	75	75.0	



computer image.

2.> The interlaced **D** sanalog signals are not supported.

English ... 30

TravelCare Guide

TravelCare - a service for international travelers

This product is eligible for "TravelCare", NEC's unique international warranty.

Please note that TravelCare coverage differs in part from coverage under the warranty included with the product.

Services offered with TravelCare

This warranty allows customers to receive service on their product at the NEC and NEC-designated service stations in the countries listed herein when temporarily traveling internationally for business or pleasure.

For details on services offered by the different service stations, please refer to the "List of TravelCare Outlets" below.

1 Repair services

The product will be repaired and delivered within 10 business days, not including shipping time.

During the term of warranty, the cost of maintenance parts, labor costs for repairs and shipping costs within the service station's coverage area are covered by the warranty.

2 Replacement product rental service

If the customer desires, he or she can rent a replacement product while the original product is being repaired.

Fee: US\$200 for 12 days

This fee must be paid at the local service station in cash or credit card.

The \$200 rental fee is non-refundable even if the customer rents it less than 12 days before returning.

The replacement product will be delivered within 3 business days. If the customer did not return the replacement product within 12 days, the customer will be charged the price of the unit.

If the customer returned the replacement product in a faulty or damaged condition, the repair cost will be charged to the customer. Note that this service is not offered in all countries and regions. Please

refer to the "List of TravelCare Outlets". In addition, this replacement product rental service is not offered af-

ter the product's warranty has expired.

Term of warranty

1

 Upon presentation of the warranty or receipt received upon purchase:

Valid for the term indicated on the warranty or the normal term of warranty for the country of purchase.

b. When only the product is brought in:

Valid for a period of within 14 months of the date of manufacture indicated by the serial number attached to the product.

- 2 When a product whose term of warranty is expired is brought in: Repairs will be offered for a fee. In this case the customer is not eligible for the replacement product rental service.
- 3 In the following cases, repairs may be charged, even if the product's warranty is still in effect:

Fight corr Diversion model name, serial number and name of the store of purchase are not indicated on the warranty or have been altered.

- the customers.
 Problems or damage caused by improper usage or unwarrantable alterations or repairs by the customer.
- 4) Problems or damage caused by fire, salt damage, gas damage, earthquakes, lightning damage, storm or flood damage or other natural disasters or such external factors as dust, cigarette smoke, abnormal voltage, etc.

- 5) Problems or damage caused by use in hot or humid places, in vehicles, boats or ships, etc.
- 6) Problems or damage caused by expendable supplies or devices connected to the product other than those designated by NEC.
- Problems caused by natural consumption, wear or deterioration of parts under normal usage conditions.
- Problems or damage to lamps and other expendable supplies, included parts or optional parts.
- Other conditions stipulated in the warranty included with the product also apply.

NOTE: The product can be used overseas with voltages of 100 to 120V and 200 to 240V by using a power cable suited for the standards and power source voltage of the country in which the product is being used.

List of TravelCare Outlets

This list applies as of December 1, 2004.

For the most up-to-date information, please refer to the websites of the service stations in the various countries on the List of TravelCare Outlets or to the NEC website at http://www.nec-pj.com.

In Europe

NEC Europe, Ltd. / European Technical Centre

Address:	Unit G, Stafford Park 12, Telford TF3 3BJ, U.K.
Telephone:	+44 1952 237000
Fax Line:	+44 1952 237006
Email Address:	AFR@uk.neceur.com
WEB Address:	http://www.neceur.com
	-

(Regions Covered)

EU:	Austria*, Belgium*, Denmark*, Finland*, France*, Germany*,
	Greece*, Ireland*, Italy*, Luxembourg*, The Netherlands*,
	Portugal*, Spain*, Sweden* and the United Kingdom*
EEA:	Norway*, Iceland and Liechtenstein

In North America

NEC Solutions (America), Inc.

Address:	1250 N. Arlington Heights Road, Suite 400
	Itasca, Illinois 60143, U.S.A.
Telephone:	+1 800 836 0655
Fax Line:	+1 800 356 2415
Email Address:	vsd.tech-support@necsam.com
WEB Address:	http://www.necvisualsystems.com

(Regions Covered) U.S.A. *, Canada*

In Oceania

Fax Line:

Email Address:

NEC Australia Pty., Ltd.

Address: New South Wales;

184 Milperra Road, Reversby 2212 Victoria;

480 Princess Hwy Noble Park 3174 South Australia;

84A Richmond Road, Keswick 5035 Queensland:

116 Ipswich Road, Woollongabba 4102 Western Australia;

> 45 Sarich Court Osborne Park 6017 131 632 (from domestic)

> > lee.gramola@nec.com.au

Telephone: 131 632 (from domest +61 8 8375 5706 (from overseas)

WEB Address: D Chttp://www.nec.com.au

+61 8 8375 5757

(Regions Covered) Australia*, New Zealand In Asia and Middle East Lenso Communication Co., Ltd. NEC Viewtechnology, Ltd. 292 Lenso House 4, 1st Floor, Srinakarin Road, Address: Address: 686-1, Nishioi, Oi-Machi, Ashigarakami-Gun, Huamark, Bangkapi, Bangkok 10240, Thailand Kanagawa 258-0017, Japan +66 2 375 2425 Telephone: Telephone: +81 465 85 2369 Fax Line: +66 2 375 2434 Fax Line: +81 465 85 2393 Email Address: pattara@lenso.com Email Address: support_pjweb@nevt.nec.co.jp WEB Address: http://www.lenso.com WEB Address: http://www.nec-pj.com (Regions Covered) (Regions Covered) Thailand Japan* ABBA Electronics L.L.C NEC Hong Kong Ltd. Address: Tarig Bin Ziyad Road, P.O.Box 327, Dubai, Address: 11th Floor, Tower B, New Mandarin Plaza, 14 United Arab Emirates Telephone: Science Museum Road. +971 4 371800 Tsim Sha Tsui East, Kowloon, Hong Kong Fax Line: +971 4 364283 Telephone: +852 2369 0335 Email Address: ABBA@emirates.net.ae Fax Line: +852 2795 6618 Email Address: esmond au@nechk.nec.com.hk (Regions Covered) United Arab Emirates WEB Address: http://www.nec.com.hk (Regions Covered) Samir Photographic Supplies Hong Kong Address: P.O.Box 599, Jeddah 21421, Saudi Arabia Telephone: +966 2 6828219 NEC Taiwan Ltd. Fax Line: +966 2 6830820 Address: 7F, No.167, SEC.2, Nan King East Road, Taipei, Email Address: vartkes@samir-photo.com Taiwan, R.O.C. Telephone: +886 2 8500 1734 (Regions Covered) Fax Line: +886 2 8500 1420 Saudi Arabia Email Address: nickliao@nec.com.tw WEB Address: http://www.nec.com.tw NOTE: In countries designated with an asterisk(*), replacement product rental service are offered. (Regions Covered) Taiwan NEC Solutions Asia Pacific Pte. Ltd 401 Commonwealth Drive, #07-02, Haw Par Address: Technocentre, Singapore 149598 Telephone: +65 6 273 8333 Fax Line: +65 6 274 2226 Email Address: tehgh@rsc.ap.nec.com.sg WEB Address: http://www.nec.com.sg/ap (Regions Covered) Singapore NEC Systems Integration Malaysia Sdn Bhd Address: Ground Floor, Menara TA One, 22, Jalan P. Ramlee, 50250 Kuala Lumpur, Malaysia Telephone: +6 03 2164 1199 Fax Line: +6 03 2160 3900 Email Address: necare@nsm.nec.co.jp WEB Address: http://www.necmalaysia.com.my (Regions Covered) Malaysia Tele Service Co., Ltd. Address: 2nd Fl., Ire B/D. #2, 4Ga, Yangpyeng-Dong, Youngdeungpo-Gu, Seoul, Korea 150-967 +82 2 2163 4193 ephone our DL +82 2 2163 4196 ax Line: moneybear@hyosung.com Email Address (Regions Covered)

South Korea TRUSTED SOURCE FOR PROJECTOR LAMPS AND ACCESSORIES

Date: / / ,

P-1/ ,

TO: NEC or NEC's Authorized Service Station: FM:

(Company & Name with signature)

Dear Sir (s),

I would like to apply your TravelCare Service Program based on attached registration and qualification sheet and agree with your following conditions, and also the Service fee will be charged to my credit card account, if I don't return the Loan units within the specified period. I also confirm following information is correct. Regards.

Application Sheet for TravelCare Service Program

Country, product purchased :				
User's Company Name :				
User's Company Address : Phone No., Fax No. :				
User's Name :				
User's Address :	/			
Phone No., Fax No. :				
Local Contact office :				
Local Contact office Address :	/			
Phone No., Fax No. :				
User's Model Name :				
Date of Purchase :				
Serial No. on cabinet :				
Problem of units per User :				
Fix YourDLP.com	(1) Repair and Return	(2) Loan unit		
Requested period of Loan unit :	Nerchar	nt.com	(800)	281-886
Payment method .	(1) Credit Card	(2) Travelers Cheque	(3) Cash	CESSORIES
In Case of Credit Card : Card No. w/Valid Date :				

Condition of your TravelCare Service Program

Enduser is requested to understand following condition of TravelCare Service Program and complete the necessary information on the application sheet.

1. Service Options:

There are 3 types of "Service" available. Enduser has to understand following condition and is required to fill in the Application Sheet.

1) Repair and Return:

The 'Faulty unit' is sent or collected from the customer. It is repaired and returned within 10 days to the customer, excluding transport time.

There may have a case, repair and return can't be done by NEC Authorized Service Station, because of shortage of spare parts due to same model is not sold in the territory.

2) Repair and Return with Loan: (This service is limited to some Service Stations)

This service is offered to the Enduser, who cannot wait until their unit is repaired.

The customer can borrow a unit for \$200 up to 12 days. Customer then sends in inoperable unit to nearest NEC Authorized Service Station for service. In order to prevent collection problem, Enduser is required to fill in Application Sheet.

Enduser needs to confirm the availability of the Service to NEC Authorized Service Stations.

3) Loan Only:

For this service, NEC Authorized Service Station supplies the customer with a loan unit for US\$200 up to 12 days. Customer keeps the inoperable unit and when customer returns home, customer arranges to have the projector serviced in the home country.

2. Warranty Exclusions:

This program does not apply if the Projector's serial number has been defaced, modified or removed.

If, in the judgement of NEC Authorized Service Station or its agent the defects or failures result from any cause other than fair wear and tear or NEC neglect, or fault including the following without limitation:

- 1) Accidents, transportation, neglect, misuse, abuse, water, dust, smoke or default of or by the Customer its employees or agents or any third party:
- 2) Failure or fluctuation of electrical power, electrical circuitry, air conditioning, humidity control or other environmental conditions such as use it in smoking area;
- 3) Any fault in the attachments or associated products or components (whether or not supplied by NEC or its agents which do not form part of the Product covered by this warranty);
- 4) Any act of God, fire, flood, war, act of violence or any similar occurrence:
- 5) Any attempt by any person other than any person authorized by NEC to adjust, modify, repair, install or service the product.
- 6) Any Cross-border charges such as, duty, insurance, tax etc.

harges for Warranty Exclusions and Out of Warranty Case: se faulty unit is under warranty exclusions case or under Out of anty period, NEC Authorized Service Station will Inform estimation or actual service cost to the Enduser with reason.

teles 1

4. Dead on Arrival (DOA):

t.com (800) 281-8860 Enduser must take this issue up with their original supplier in the coun-ECTOR LAMPS AND ACCESSORIES try of purchase. NEC Authorized Service Station will repair the DOA unit as a Warranty repair, but will not exchange DOA unit with new units.

5. Loan Service Charges and Conditions:

Upon acceptance of this NEC Projector, Customer agrees to assume liability for this loan unit.

The current cost of use of this loan unit is \$200.00 USD for 12 calendar davs.

If Customer does not return the unit within the 12 calendar days, Customer will be charged the next highest cost up to and including the full list price to Credit Cards, which price will be informed by NEC Authorized Service Stations. Please see the attached listing of contacts for each country to arrange for pickup of the loan unit.

If you return to their country of origin with the loan unit, you will be charged additional freight to return the unit to the loaning country.

Thank you for your understanding of this program.

A-4

LIMITED WARRANTY (USA and Canada only)

NEC SOLUTIONS' PROJECTOR PRODUCTS

NEC Solutions (America), Inc. (hereafter NEC Solutions) warrants this product to be free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

NEC Solutions' LT20 projector is covered by a two (2) year limited parts and labor warranty from the date of the first customer purchase. The lamp when used under normal operating conditions is warranted for 500 hours or 90 days, whichever comes first.

WHO IS PROTECTED

This warranty may be enforced only by the first purchaser, and is not transferable.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as specified below, this warranty covers all defects in material or workmanship in this product.

NEC SOLUTIONS' LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT AT NEC SOLUTIONS' OPTION. REPLACEMENT PRODUCTS MAY BE NEW OR RECONDITIONED PRODUCTS, AND REPLACEMENT PARTS MAY BE NEW OR SERVICEABLE USED PARTS. The following are not covered by the limited warranty and NEC Solutions shall not be liable for:

- 1. Any product which is not distributed in the U.S.A. or Canada by NEC Solutions or which is not purchased, installed, and operated in the U.S.A or Canada.
- Any product on which the serial number has been defaced, modified or removed.
- 3. Normal decrease in lamp light output over time.
- 4. Damage, deterioration or malfunction resulting from:
 - Accident, misuse, abuse, neglect, improper ventilation, fire, dust, smoke, water, lightning or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
 - b. Repair or attempted repair by anyone other than a NEC Solutions authorized service center.
 - c. Any shipment of the product (claims must be presented to the carrier).
 - d. Removal or installation of the product.
 - e. Any other cause which does not relate to a product defect.
 - f. Use of the product beyond normal operating conditions. Normal operating conditions are defined as product use not in excess of 8 hours per day and 260 days per year.
- Cartons, carrying cases, shipping cases, batteries, external cabinets, magnetic tapes, or any accessories used in connection with the product.

Service required as a result of third party components.

WHAT NEC SOLUTIONS WILL PAY FOR

NEC Solutions will pay labor and material expenses for covered items, but NEC Solutions will not pay for the following:

- 1. Removal or installation charges.
- Costs of technical adjustments, set-up, maintenance, or adjustment of user controls.
- 3. Payment of shipping and related charges incurred in returning the product for warranty repair.

HOW YOU CAN GET WARRANTY SERVICE

- 1. To obtain service on your product, consult the dealer from whom you purchased the product.
- 2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage. In order to obtain warranty service, you may be required to describe and demonstrate the problem to your dealer or to NEC Solutions.
- All products returned to NEC Solutions for service MUST have prior approval. To receive approval or for the name of the nearest NEC Solutions authorized service center, call NEC Solutions at 800-836-0655.
- 4. It shall be your obligation and expense to ship the product, freight prepaid, or to deliver it to a NEC Solutions authorized service center, in either the original package or a similar package affording an equal degree of protection.
- 5. In the event a product is returned to NEC Solutions for warranty service, and it is determined that there is no product defect or that the product condition is not covered by this limited warranty, a diagnostic service fee may be charged to the customer.

LIMITATION OF IMPLIED WARRANTIES

EXCEPT AS EXPRESSLY SET FORTH IN THIS LIMITED WARRANTY, NEC SOLUTIONS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRAN-TIES THAT MAY BE IMPOSED BY LAW ARE LIMITED TO THE TERMS AND DURATION OF THIS LIMITED WARRANTY.

EXCLUSION OF DAMAGES

NEC SOLUTIONS' LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT AT NEC SOLUTIONS' OPTION. NEC SOLUTIONS SHALL NOT BE LIABLE FOR:

- 1. DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THIS PRODUCT, DAMAGES BASED UPON INCONVE-NIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, COMMERCIAL LOSS; OR
- 2. ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSE-QUENTIAL OR OTHERWISE.

HOW STATE LAW RELATES TO THE WARRANTY

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUEN-TIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLU-SIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

FOR MORE INFORMATION, CONTACT:

NEC SOLUTIONS (AMERICA), INC. 1250 N. Arlington Heights Road Itasca, Illinois 60143-1248 TELEPHONE 800-836-0655 www.necvisualsystems.com

Customers are cautioned that product performance is affected by system configuration, software, the application, customer data, and operator control, among other factors. While NEC Solutions' products are considered to be compatible with many systems, the specific functional implementation by the customers of the product may vary. Therefore, the suitability of a product for a specific purpose or application must be determined by the customer and is not warranted by NEC Solutions.

DECLARATION OF CONFORMITY

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.





This user manual is provided as a free service by FixYourDLP.com. FixYourDLP is in no way responsible for the content of this manual, nor do we guarantee its accuracy. FixYourDLP does not make any claim of copyright and all copyrights remain the property of their respective owners.

About FixYourDLP.com

FixYourDLP.com (http://www.fixyourdlp.com) is the World's #1 resource for media product news, reviews, do-it-yourself guides, and manuals.

Informational Blog: http://www.fixyourdlp.com Video Guides: http://www.fixyourdlp.com/guides User Forums: http://www.fixyourdlp.com/forum

FixYourDLP's Fight Against Counterfeit Lamps: http://www.fixyourdlp.com/counterfeits

Sponsors:

RecycleYourLamp.org – Free lamp recycling services for used lamps: http://www.recycleyourlamp.org

Lamp Research - The trusted 3rd party lamp research company: http://www.lampresearch.com

Discount-Merchant.com – The worlds largest lamp distributor: http://www.discount-merchant.com

