Prolong exposure to computer screens may cause temporary visual fatigue. Factors including working environment, working habit and posture, screen flicker and blue light contribute to this condition. To minimize visual fatigue certain adjustments can be made on the work stations or using suitable computer screens with features that alleviate eye strain.

Environment

Visual fatigue is affected by the working environment. Glare reductions and appropriate lighting situations help minimize this condition.

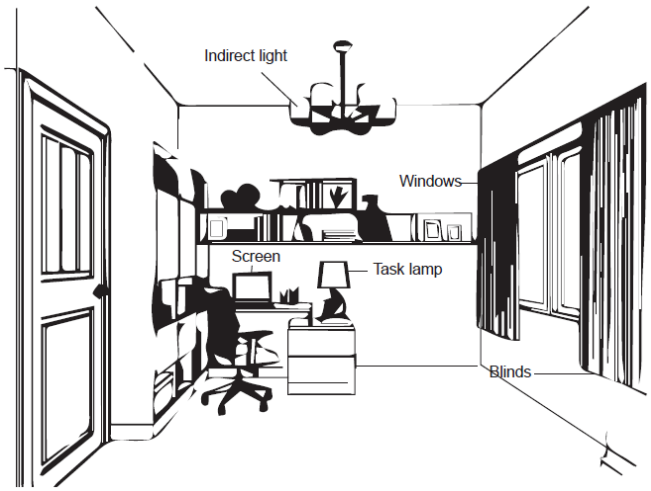
- *Glare reduction*

  Glare can be reduced by

  a) Changing position of any light source that is causing the glare
  b) Fitting the light sources with appropriate diffusers or lampshade
  c) Using curtains or blind on windows to minimize glare from direct sunlight
  d) Adjusting monitor position to be perpendicular to the source of light or windows.
  e) Using an anti-glare screen - ThinkVision monitors have anti-glare surface treatment that scatters light for a reflection-free work usage.

- *Lighting*

  Adequate lighting is necessary to avoid glare and eye fatigue. Excessive or insufficient lighting makes the display on screen harder to see. Generally, lighting level should not exceed 750 lux and levels ranging from 300 to 500 lux are most appropriate for computer desk work. Recommended lighting arrangement includes positioning work stations away from direct sunlight or using overhead lighting with baffles or louvers that reduces glare.



Working Habits

Long exposures to computer screens may cause eye strain. Symptoms include headache, burning eyes, blurred vision and discomfort. To minimize eye strain, computer users can adjust working habits to let their eyes relax and recover.

- *Break Times*

  Computer users should take some time away from the screen especially if working for prolong hours. Generally, it is recommended to take short breaks (5 – 15 mins) after 1 – 2 hours of continuous computer works. Taking short and frequent breaks is more advised than longer breaks.

- *Looking at Distant Objects*

  Users often blink less when in front of monitor screen. To minimize eye strain and dryness, users should rest the eye periodically by focusing on objects that are far away.

- *Eye and Neck Exercises*

  Certain exercise reduces eye strain and prevent early onset of musculo-skeletal disorders. It is recommended to repeat these exercises often. However, should symptoms persists it is recommended to consult a physician.

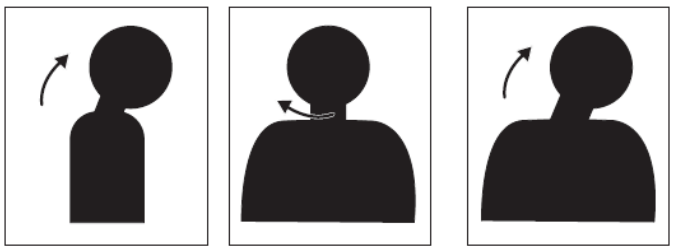
  Exercises for the eye:

  1. Alternate looking up and looking down while keeping the body and head upright.
  2. Slowly roll your eyes to look to the left and right.
  3. Roll eyes to look at objects on the upper right corner and then on lower right. Do same thing to look at objects on the upper left and lower left.

  Exercises for the neck:

  1. Relax arm at the side. Bend head forward to slightly stretch the neck. Hold for 5 seconds.
  2. Relax arm at the side. Turn thead to the right. Hold for 5 seconds. Then turn head to the left.
  3. Relax arm at the side. Swing head to the left. Hold for 5 seconds. Then swing head to the right.

1 **2** **3**



Working Posture

Appropriate working position helps minimize eye discomfort. Seating position and ideal placement of monitor are essential for a comfortable working experience

- *Seating Position*

  Placing the monitor too far or too close may lead to eye strain. Far viewing distance causes users to lean forward to see small texts, which strain the eyes and torso. Close viewing distance, on the other hand, strains the eye resulting from exerting more effort to focus and also causes the user to sit in awkward body posture (i.e. tilting the head, typing with outstretched arms, etc.)

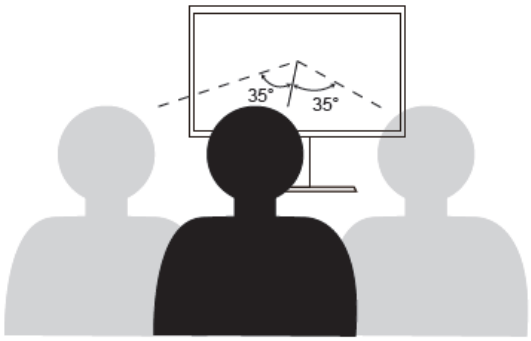
  Recommended viewing distance between the eye and the monitor screen is 1.5 x the diagonal of the screen. Solutions in meeting this required distance in cramped office situations include pulling desk away from wall or divider to make room for monitor, using flat panel or compact displays placing the monitor in the desk corner, or placing the keyboard in an adjustable drawer to create a deeper working surface.



  ThinkVision monitors are design to maximize work space (e.g. having thin profiles, compatible for ThinkCentre Tiny back mount, practical cable management, etc).

- *Viewing Angle*

  Neck fatigue and pain may result from prolong turning of the head to see objects on the monitor screen. To minimize this, position the monitor directly in front so the head, neck and torso face forward to the screen. It is recommended that monitor should not be more than 35 degrees to the right or left of the head.



Monitors should also not be placed too high or too low as this contributes to awkward posture which results to muscle fatigue. It

Reduce Flicker

Monitor flickers refer to repeated changes in monitor light intensity. It is caused by several factors including but not limited to voltage fluctuations. Reducing flicker minimizes eye strain and headaches. ThinkVision monitors allow users to use high frequency display modes that can effectively reduce flicker.

Low Blue Light

Concerns on blue light affecting eye health have risen over the years. Blue light have wavelength between 300 nm to 500 nm. Legion 27Q-10 OLED is a monitor with the low blue light panel that reduces blue light emissions by hardware solution.