

# *E-Z Optial / Eye Protection*

## **HIGH ENERGY VISIBLE (“HEV”) LIGHT EXPOSURE**

- Commonly called “BLUE LIGHT”.
- Normal amounts of HEV light can be healthy, however excessive amounts can be damaging to the eyes.
- Increased use of electronic devices and energy saving light bulbs increases our exposure to HEV light.
- HEV Light waves are among the shortest length and highest energy wavelengths in the visible light spectrum.
- Because they are shorter, they flicker more easily.
- Flickering creates a glare that can reduce visual contrast and affect sharpness and clarity.
- Most of us spend the majority of our waking hours exposed to computers, cell phones, tablets, video games, TV, LED and Fluorescent light tubes.
- Digital eye strain is a medical issue with serious symptoms that can affect learning and work productivity.
- Can cause eyestrain, blurred vision, difficulty focusing, dry and irritated eyes, headaches, neck and back pain, physical and mental fatigue.
- Digital eyestrain has overtaken carpal-tunnel syndrome as the number one computer related complaint.
- Children and teenagers (8-18) spend more than 7 hours a day consuming electronic media.
- Children are at greater risk because the lens in their eye has not had a chance to begin the clouding process so more light is allowed on the retina.
- Our eyes' natural filters do not protect against blue light rays from the sun, let alone prolonged exposure to HEV.
- HEV light has been identified for years as the most dangerous light for the retina.
- Prolonged exposure may cause retinal damage and contribute to Age-Related

## *E-Z Optial / Eye Protection*

Macular Degeneration which can lead to loss of vision.

- Nearly 70% of adults who report regular usage of media devices experienced some symptom of digital eyestrain.
- Many do not do anything to lessen discomfort due to lack of knowledge.
- New technology is available:
  - Lenses infused with melanin selectively absorb harmful blue light.
  - Protective Ophthalmic lenses with a special coating designed to reflect and cut HEV light penetration are available for indoor use.
  - Sunglasses, which are specially tinted or polarized to absorb the HEV blue rays, are perfect for outdoors during the day.
- Take a 20-20-20 Break. Every 20 minutes, take a 20 second break and look at something 20 feet away.
- Use specialty computer lens designs to relax eyes and reduce eyestrain.
- Monitor your cumulative exposure to HEV light – and your children's exposure!
  - 2-6 hours per day of exposure you should consider HEV protection.
  - 6+ hours per day of exposure you need HEV protection.
- Help inform your family and community about the dangers of HEV Light.

### **SOURCES**

The Vision Council

Prevent Blindness America

American Optometric Association

American Academy of Ophthalmology

American Academy of Pediatrics

Harvard Medical Studies

Consumer Product Safety Commission's National Injury Surveillance System

Occupational Safety and Health Administration (OSHA)

American National Standards Institute (ANSI)

American Society for Testing and Materials (ATSM)