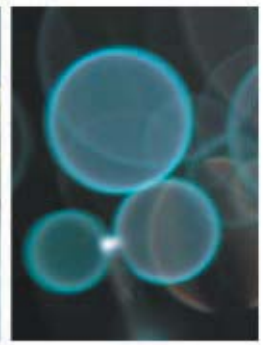


red three **EE**
European Eyesafety Engineering



EYESAFETY REVOLUTION
PROTECTIVE LENSES **NXT**[®]
BEYOND THE BOUNDS OF CURRENT POSSIBILITY





About company

Red three E is focused on High-Tech eye and hearing protection on medical base.

Our objective is to introduce more technical, medical and fashionable trends to the industry. We are developing products featuring the latest technology and designs, looking good, inspirational colours, sophisticated shapes, while also meeting the most stringent safety criteria. The selection of the best quality hi-tech materials with a sense of elegance has resulted in a unique collection of safety glasses and safety lenses which are appropriate for all industries.

Cooperation with top R&D and design centers in Europe and USA allow us to go beyond the bounds of current possibility and introduces new solutions and approaches in professional eye safety.

Our range of safety lenses made of newest material meets the highest optical quality and mechanical-chemical features.

Red three E is an official partner of NXT® for industrial application.



NXT® development

The patented NXT® technology was originally developed in the early 1990's for military use.

NXT® was born to meet a specific need: provide a transparent, lighter than CR-39 and PC, bullet proof material superior to Polycarbonate, optical superior to other lens material currently available, outstanding mechanical performance and solvent resistant.

Thanks to its specific features lenses from NXT® are ideal and strategic components for protective safety glasses plano and prescription.

NXT® overcome limitations and possibility of CR 39 and Polycarbonate (PC). NXT® has an impact resistance, anti-scratch protection and optical quality significantly higher than the one of CR39 or PC.

Advantages of NXT®:

- NXT® lens is very light
- NXT® lens is optical superior
- NXT® lens has outstanding impact resistance
- NXT® lens is unbreakable
- NXT® lens is very stable against solvents
- NXT® RX possibility

Coating possibility of NXT®:

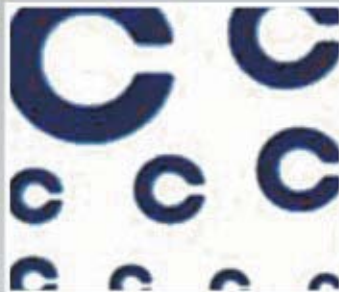
- Photochromatic
- Polarization
- Antireflection
- Antifog
- Hydrophobic and oleophobic
- Antistatic
- Mirrored
- Melanin

Optical characteristic of NXT®

Optical features comparison of selected materials

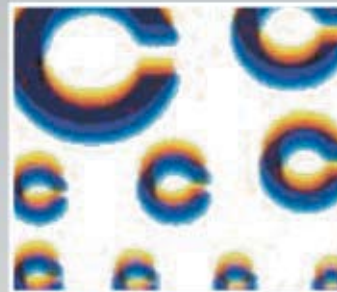
Characteristic	CR-39®	Polycarbonate	NXT®
Impact resistance (ANSI Z87.1)	Fail	Pass	Pass
EN 166	Pass	Pass	Pass
MIL PRF 31013 width 2,45 mm	Fail	Fail	Pass
Specific Gravity	1.32	1.22	1.11
Refractive Index	1.50	1.59	1.53
Abbe Number	58	29	45
Birefringence	No	Yes	No
Chemical Resistance	Good	Poor	Good
Stress Cracking	Brittle	Sensitive	Not sensitive

Abbe number



NXT®

Has higher abbe number, that means lower chromatic aberration effect.



PC

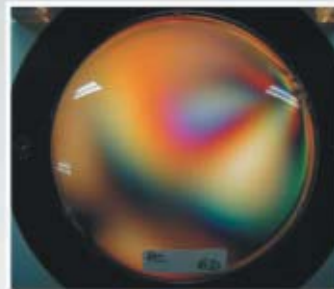
Has lower abbe number, that means higher chromatic aberration effect.

Birefringence



NXT®

Birefringence is optical aberration as results of internal stress in material. User feel this aberration as distort vision. NXT® doesn't have internal stress in structure.



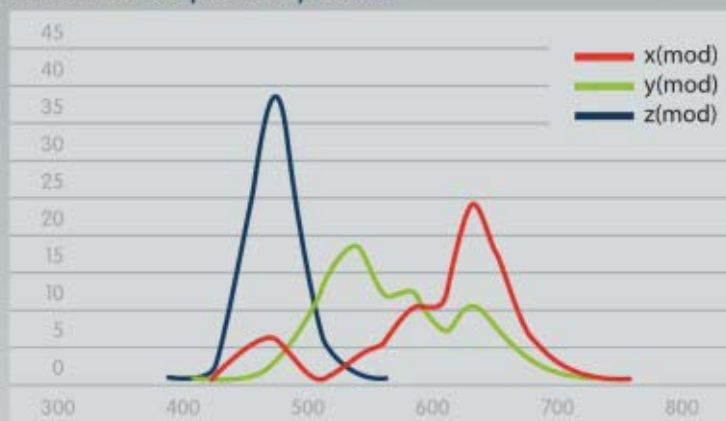
PC

Technical specification

NXT® technical specification

Lens diameter	75 mm a 80mm
Minimal thickness	1,2 mm
Curvature	B5, B6, B8, B2, B4
Optical class	1
Production method	casting

Chromatic response by colors



Y - chromatic response

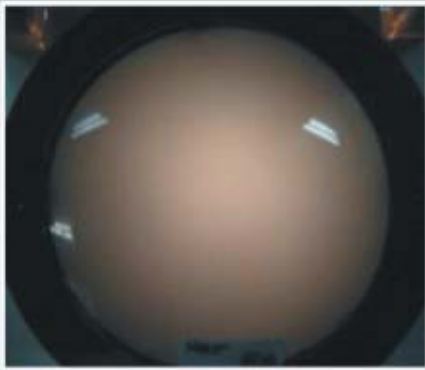
X - wavelength (nm)

XP technology enhance perception of colors.

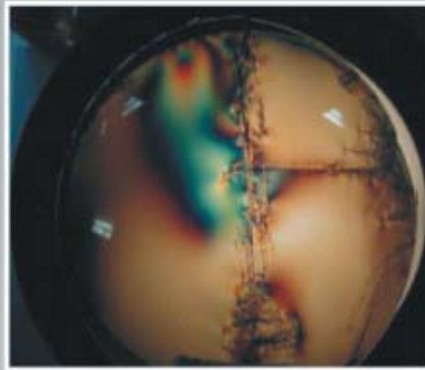


Chemical resistance

Solvents, gasoline and vapours of many chemical substances can damage lens or permanently destroy it. Optical, mechanical features of lens exposed to chemical aggressive environment are reduced. Lens is not providing the same level of impact protection and represent probable danger for user.



NXT®



PC

NXT® after contact with acetone, gasoline or exhaust gas keeps optical and mechanical characteristics.



fast photochromatic reaction

NXT[®] coating

Red three E introduce new patented technology NXT[®] for protective safety glasses, which provide people employed in industry better optical quality and higher level of impact resistance as never before.

NXT[®] Varia[®]

Photochromatic lens

'in-mass' photochromics (automatic light control for varying weather conditions)

NXT[®] Polar[®]

Polarization (optimized for efficiency and contrast to control reflected glare)

NXT[®] Polar Varia[®]

Combination of photochromatic and polarization

NXT[®] XP

color contrast filtration (enhances colors and improves reaction times)

NXT[®] Melanin

Melanin (efficiently filters high-energy visible blue/violet)

NXT[®] Anti reflection

Anti-reflection coatings (improves contrast and visibility)

NXT[®] Hydro

Hydrophobic and oleophobic coatings (Enhances durability and ease of cleaning)

NXT[®] Gradal

Gradient and double gradient filtration (selective control of overhead and reflected glare)

NXT[®] Mirror

Mirror coatings (many types and colors) (further reduces glare)

NXT[®] Anti-fog

Anti-fog coating (improves visibility in extreme conditions)



Guaranteed unbreakable for life

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