

# THE OAKLEY<sup>®</sup> BRAND

Mad scientist and innovator, Jim Jannard, started Oakley out of his garage in 1975 - with \$300 and the simple idea of making products rooted in the belief that everyone in the world can, and will, become better.

Over 40 years later, Oakley has matured into more than a sunglass company, becoming one of the leading product design and sport performance brands in the world.

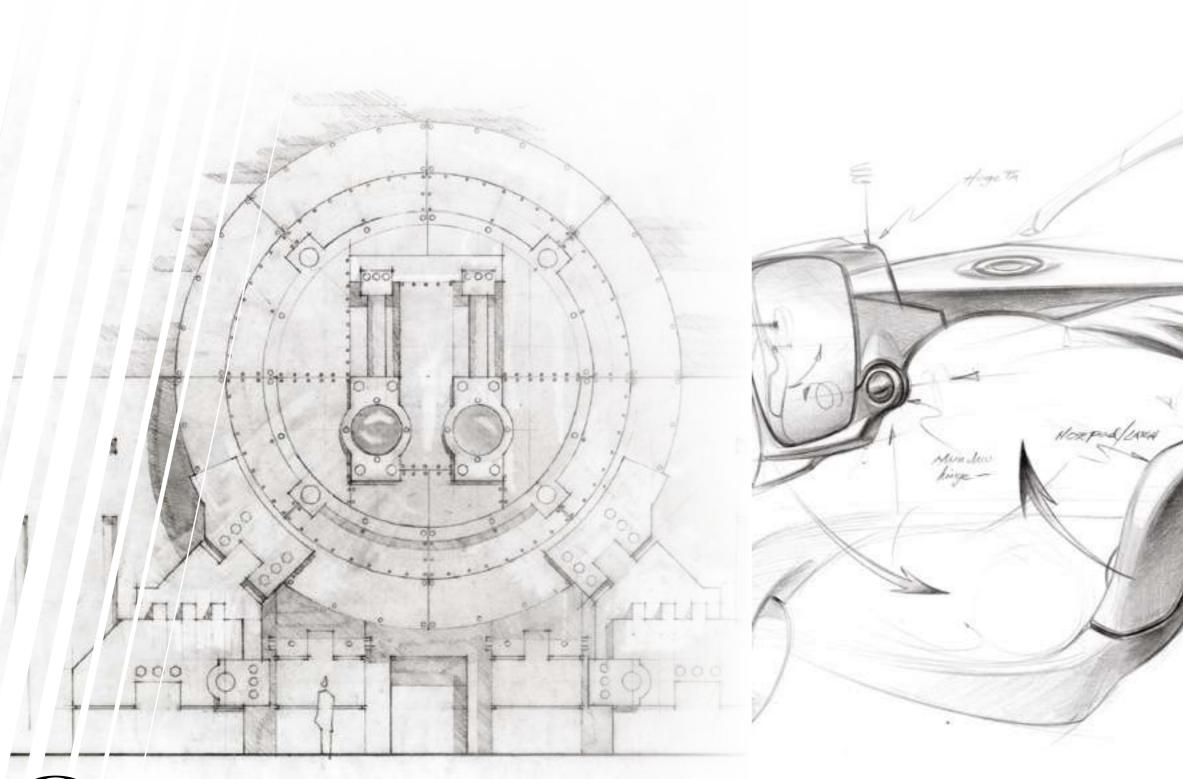
As pioneers of innovation and high performance optics, Oakley ignites and protects the quest for personal progression and individual expression.

# **SEEING IS BELIEVING**

Oakley<sup>®</sup> eyewear is designed to perform for sport and everyday life. Rooted in over 40 years of history in innovation with products world-class athletes around the globe depend on to compete at the highest levels. Developing a lens is a perfect science. The closer you come to perfect, the better the experience.

All Oakley lenses and frames are purpose-built for each other, as one cohesive product designed to ensure maximized performance and comfort. Each cut of the lens is precise – too small of a cut and the lens will move within the frame, and too large of a cut and the lens will not fit properly.

It is Oakley's research, technologies, design, materials, testing and manufacturing that result in eyewear good enough for the world's best.



OAKLEY AUTHENTIC PRESCRIPTION

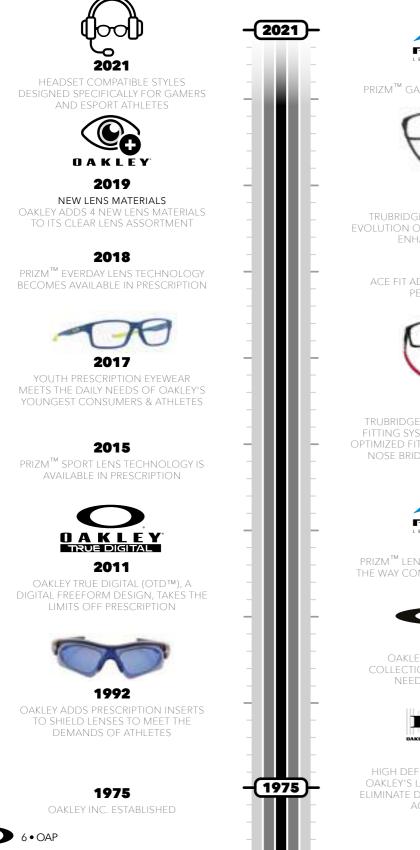
INTRODUCTION

# **PRESCRIPTION CATEGORY HISTORY**

# **A LOOK BACK AT HOW WE GOT HERE**

The Oakley<sup>®</sup> Prescription Collection is engineered with premium performance materials, innovative technologies and iconic designs that are created to deliver unrivaled vision benefits and all-day comfort for life beyond sport.

Rooted in sport and performance, the key milestones that have shaped the Oakley brand in Prescription, include:



PRIZ 2020 PRIZM<sup>™</sup> GAMING LENS TECHNOLOGY



2019 TRUBRIDGE™ + UNOBTAINIUM®, AN EVOLUTION OF TRUBRIDGE TECHNOLOGY, ENHANCED FOR SPORT

> 2018 ACE FIT ADJUSTABLE TEMPLES FOR PERSONALIZED FIT



TRUBRIDGE™ TECHNOLOGY, A FRAME FITTING SYSTEM TO HELP PROVIDE AN OPTIMIZED FIT FOR THE 4 MOST COMMON NOSE BRIDGE WIDTHS AND DEPTHS



PRIZM<sup>™</sup> LENS TECHNOLOGY CHANGES THE WAY CONSUMERS VIEW THE WORLD



OAKLEY OPTHALMIC FRAME COLLECTION MEETS PRESCRIPTION NEEDS OUTSIDE OF SUN



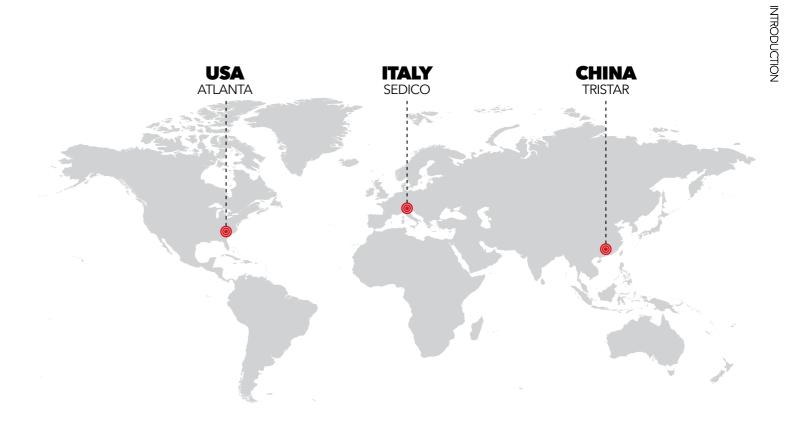
HIGH DEFINITION OPTICS® (HDO®), OAKLEY'S LENS TECHNOLOGY HELPS ELIMINATE DISTORTION FOR THE MOST ACCURATE VISION

# **BUILT THE OAKLEY<sup>®</sup> WAY, AUTHENTICALLY**

# **THE OAKLEY ADVANTAGE**

Developing a lens is a science and Oakley has designed a process that works. The Oakley Prescription Lab is founded on quality, function and innovation, resulting in eyewear with prescription lenses built exactly to the customer's needs, in the most Oakley authentic way.

The Oakley Lab network has expanded to three regional labs, which are fully integrated into the Luxottica lab network, to better service the needs of the business and ensure order accuracy.



A key benefit to eyecare professionals and patients is that when they order through the Oakley Lab, the eyewear maintains its integrity, keeping the warranty on both the lenses and the frames. Only on Oakley Authentic Prescription lenses will the wearer find the signature ellipse logo; an icon of uncompromising quality and proof of Oakley Authenticity.



MADE TO ORDER

HIGH QUALITY ASSEMBLY



AKLEY AUTHENTIC PRESCRIPTION





**ORIGINAL PACKAGING &** DELIVERY OF COMPLETE PAIR OF EYEWEAR OR AUTHENTIC OAKLEY PRESCRIPTION LENSES TO POINT OF SALE



# **AUTHENTIC PRESCRIPTION** FRAME TECHNOLOGY



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# **PHILOSOPHY OF A DESIGN**

# **THE OAKLEY® DESIGN ETHOS**

The Oakley design ethos focuses on innovation, in both aesthetics and functionality.

# **THE CREATIVE FOR PRESCRIPTION**

Pushing the boundaries of what is possible, the Oakley Authentic Prescription collection draws design inspiration from outside industries that feature beautifully designed, technical and functional products, including automobiles, watches, fashion collections, architectural details and more.

One of the many features that sets the Oakley Authentic Prescription eyewear apart from the rest of the market is a lasting design philosophy. Driven to strike a delicate balance between high functionality and iconic aesthetics, the collection exemplifies a true marriage between form and function. A smart usage in materials with consideration to their characteristics, such as cross-sectional strengths, durability, strength-to-weight ratio, resistance to the elements and other inherent properties, result in frames that are athletic not only in usage, but in shape. Oakley's Authentic Prescription collection features a lean, minimal aesthetic that celebrates all the functional components that make a usable, yet stylish, product. In the end, Oakley's design ethos centers around creating a product with a lasting impression.

# **ETCHED FOR AUTHENTICITY**

# THE OAKLEY<sup>®</sup> LOGO

Only Oakley Authentic lenses are signed with the ellipse logo, an icon of uncompromising quality for proof of Oakley authenticity.







# **MATERIALS THAT MATTER**

# **FRAME MATERIALS**

Engineering breakthroughs in structural materials allow Oakley® to produce lightweight, high-performing frames designed to maintain uncompromising protection and all-day comfort.



# **O MATTER**<sup>™</sup>

Oakley's injection molded thermoplastic O Matter^{{\sc m}} frame material provides improved strength and flexibility over traditional acetate, and is built to withstand form shifting or deforming over time.

# TITANIUM

An ultra-lightweight, virtually indestructible material used in fighter jets, that allows us to produce some of the strongest, lightest and most comfortable Oakley frames.



# **NANO-MATTER®**

Oakley's ultra-lightweight durable frame material allows for all-day comfort and resistance to the elements.

# **STAINLESS STEEL**

The durability of an extremely high strengthto-weight ratio allows us to craft frames with comfortably thin architecture.

# **CARBON FIBER + O MATTER™**

With durability that comes from decades of research and development in sports innovation, the combination of ultra-lightweight carbon fiber temples with an O Matter front material provides superior comfort and flexibility.

# ALUMINUM

The high strength-to-weight ratio of Oakley's aerospace grade aluminum alloy enables bold designs in a durable, highly corrosion-resistant and very lightweight frame construction,



# **C-5**™

To produce the ultra-strong chassis of Oakley wire frames, five metallic compounds are fused into a single C-5™ alloy.















# **STRENGTH THROUGH DESIGN**

# HINGES

Oakley<sup>®</sup> hinge designs range from the miniaturized mechanics of dualcam action to spring hinges built to maintain a stable, pressure-free fit.

Inspired by racing technology, these industry-leading hinge designs provide unrivaled durability and unique aesthetics without compromising comfort or fit.

# **LATCH™**

The Latch hinge is an interior kick-up feature that lets you clip you glasses to your shirt, allowing you safely stow your eyewear and move seamlessly through your day.

# **HOLLOWPOINT**<sup>TM</sup>

Inspired by hubless motorcycle wheels, the Hollowpoint<sup>™</sup> hinge has a self-contained spring cam mechanism and internal piston, showing an elegantly minimalist design.

# **TWINSHOCK**<sup>TM</sup>

Inspired by pro-racing, the dual tine structure of the hinge is similar to leaf springs used for shock absorption, combining durability, flex and comfort.

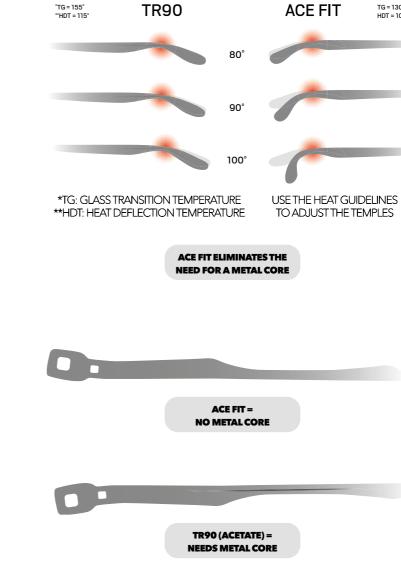


Flexibility, comfort and fit are combined through mechanical precision to create the refined aesthetic of this single tine hinge.

# **ACE FIT TECHNOLOGY**

# ADJUSTABLE TEMPLES FOR PERSONALIZED FIT

Ace Fit, a frame fit technology from Oakley, allows eye care professionals (ECPs) to adjust the temple of a frame based on the wearer's personal preference to help enhance their comfort and retention.



# KLEY AUTHENTIC PRESCRIPTION



ACE FIT TEMPLES

TG = 130° HDT = 100°

Ace Fit Technology requires two properties in order to function effectively.

1) The temples need to be heated to an advised temperature, and 2) must be constructed from a material with the same strength and weight benefits of O Matter to help maintain the shape.

With the right amount of heat, ECPs are able to bend and manipulate Ace Fit temples to wrap behind a patient's ear for a more secure fit or added comfort. ECPs can customize the amount of bend based off a patient's preference and comfort.

A polyamide grade temple material developed exclusively for Luxottica allows ECPs to follow the process used to adjust TR90 (Acetate), without compromising the shape of the frame - eliminating the need for wire cores.



# **ENGINEERED TO PERFORM**

# **ENGINEERED TO FIT**

# **ADVANCER**<sup>TM</sup>

Advancer nose bridge instantly opens airflow to combat fogging and overheating. A simple actuator toggle allows you to advance the frame, with a single hand, directly forward instead of down your nose.



# **NO-SNAG NOSE**

Oakley®'s patented, hassle-free and adjustable nosepads won't snag or pull on hair. Transitioning eyewear from the top of your head to face has never been easier.



# LIFESTYLE ADVANCER<sup>TM</sup>

All the advantages of Oakley® Advancer™ technology is discreetly featured in a lifestyle frame. Advancer™ technology is designed to instantly open airflow to combat fogging and overheating.



Oakley Switchlock® technology makes the process of lens changing quick and hassle-free. When the condition changes from sunny to overcast, a simple switch mechanism releases to let you rapidly swap out lenses to adapt to varying light conditions.





# **NO-SLIP GRIP**

Unobtainium<sup>®</sup> is the first innovative material patented by Oakley and used for temple tips and nosepads. It ensures maximum comfort by increasing grip with perspiration and keeping the frame in place without slipping.





FRAME TECHN

# **SECURE FIT**

Ensures that the frame makes contact only with the nose bridge and behind the temples to eliminate discomfort and pressure.



# **TRUBRIDGE<sup>TM</sup> TECHNOLOGY**

# **PERSONALIZE FIT WITHOUT COMPROMISING STYLE**

Gone are the days when you had to compromise style for fit. Oakley<sup>®</sup>'s TruBridge<sup>™</sup> technology provides optimum vision by creating a centered line of sight where the prescription is most accurate; maximum pad contact for even weight distribution; and a fit that eliminates cheek contact for all day comfort.

With our revolutionary frame fitting system, a perfect fit is easy, so you can choose whatever style you want and not worry about how it will feel. TruBridge<sup>™</sup> technology adapts the frame to the width and depth of your nose bridge, so you never have to pass up a style you love. TruBridge technology creates an optimized fit with four different size O Matter<sup>™</sup> nosepads.

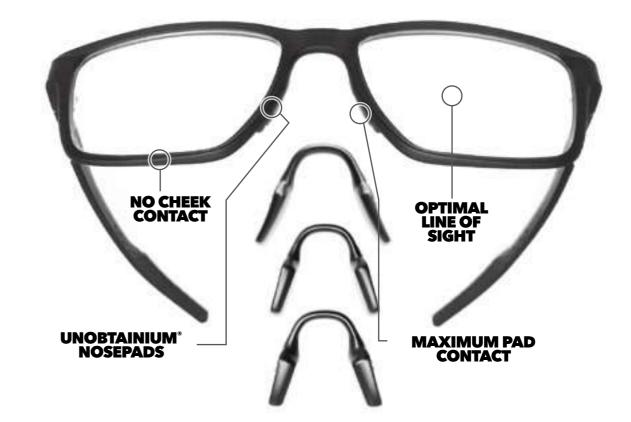
# NO CHEEK CONTACT **CENTERED LINE OF SIGHT MAXIMUM PAD CONTACT**

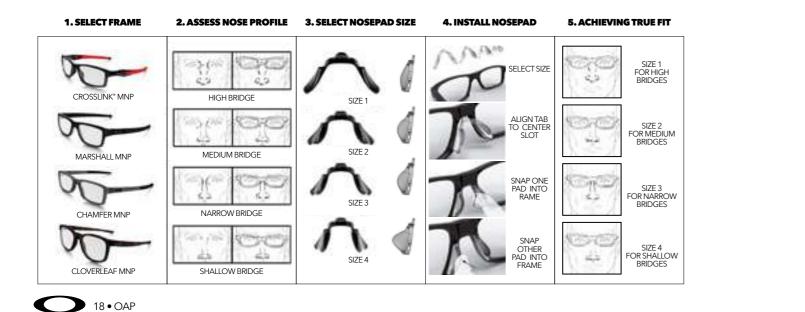
# **TRUBRIDGE™** + **UNOBTAINIUM® TECHNOLOGY**

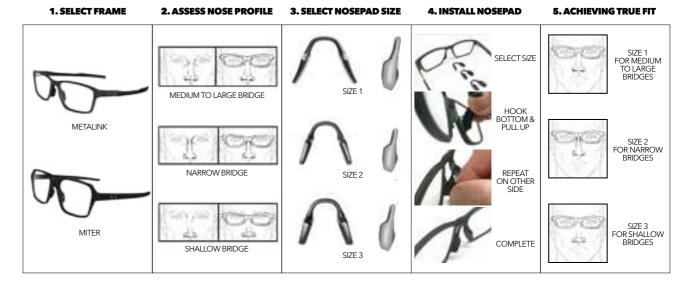
# **PERSONALIZE FIT FOR SPORT**

TruBridge<sup>™</sup> + Unobtainium<sup>®</sup> is a frame fitting system based on Oakley<sup>®</sup>'s TruBridge technology enhanced with our best in class performance nosepad that is designed to offer extra grip for sport and activity.

A key solution to the issue of varying nose bridge widths and depths but with an improved fit, comfort and retention, this next generation of TruBridge technology creates an optimized fit with three different size no-slip Unobtainium nosepads.









# AUTHENTIC PRESCRIPTION



# **OAKLEY<sup>®</sup> AUTHENTIC PRESCRIPTION SUN**

**OVERVIEW** 

# **PRIZM™ LENS TECHNOLOGY**

Prizm<sup>™</sup> is a revolutionary Oakley lens technology designed to enhance color and contrast so you can see more details. A variety of Oakley Prizm<sup>™</sup> Everyday and Oakley Prizm<sup>™</sup> Sport lenses are available with prescription - giving athletes and consumers a true Oakley authentic advantage.





# **OAKLEY TRUE DIGITAL FREEFORM TECHNOLOGY**

Oakley True Digital<sup>™</sup> Freeform Technology (OTD<sup>™</sup>) lenses are digitally optimized point by point on the back surface to help provide HIGH DEFINITION VISION: greater clarity, wider field of vision, and high prescriptions in oakley high-wrap frames.

# **SOLUTIONS FOR SPORT**

Oakley sports performance eyewear is designed to meet the uncompromising demands of world-class sport professionals by merging Oakley Prizm<sup>™</sup> Sport lenses, protective coatings, digital surfacing technology, SHIELD INSERTS, frame technologies, and progressive lenses optimized for specific sports and other outdoor activities.





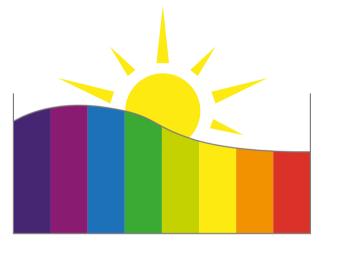


**#2 CONTRAST** Defined to increase depth perception

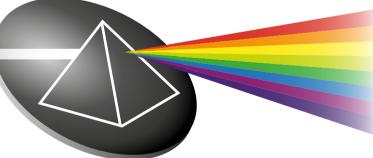
# SEE IT IN PRIZM™

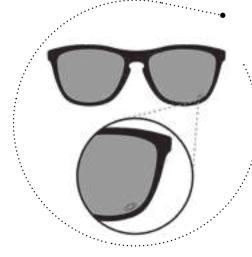
Oakley® Prizm™, a revolutionary lens technology grounded in decades of research, was born out of the understanding of the human eye and how the brain functions in conjunction with the eye to create the perception of color. The technology was engineered to fine-tune vision and optimize contrast.

A variety of Oakley Prizm<sup>™</sup> Everyday and Oakley Prizm<sup>™</sup> Sport lenses are available with prescription giving athletes and consumers a true Oakley authentic advantage.



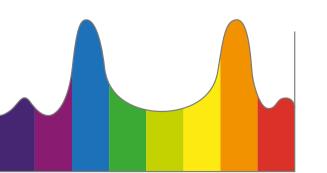
# **OAKLEY PRIZM<sup>™</sup> LENS**





# **ETCHED FOR AUTHENTICITY**

Only Oakley Authentic prescription lenses come laser etched with the Oakley "O" - an icon of innovation and leading technology for proof of Oakley authenticity and uncompromising quality.



22 • OAP

SUN



#3 DETAILS

and highlight features in the surrounding environment.

Reveals what you may not see with the naked eye.

# THE PERCEPTION OF COLOR

Through an understanding of the complex way the eye interprets color, Oakley innovators engineered lenses that fine-tune the specific wavelengths of light that make the eye perceive color more vividly

# **PURPOSE TUNED COLOR**

Oakley analyzes each environment to determine which colors are important to see. Based on the mechanism of the eye and the visual demands of the environment, Oakley adjusts the color filtering to enhance the visual experience through the specific Prizm<sup>™</sup> lens







RATE OF TRAN

PRIZM™ TRAIL TORCH BASE COLOR:

Engineered to help you spot transitions between dirt and distinguish obstacles in a variety of lighting conditions so you can ride with confidence.







GOLF





PRIZM™ GOLF



**PRIZM**™

BASE COLOR:

DEEP WATER

POLARIZED



BASE COLOR: RATE OF TRAI

PRIZM<sup>TM</sup> DARK you read the course better.

Engineered to help you spot transitions between the fairway, fringe, and rough and gauge distance with accuracy to help









- PRIZM<sup>TM</sup> FIELD BASE COLOR RATE OF TRAN
- Engineered to enhance contrast to help you easily track the baseball against the green of the grass and the brown of the dirt.



# PRIZM<sup>TM</sup> EVERYDAY

**INCREASED CONTRAST LENS** Oakley<sup>®</sup> Prizm<sup>™</sup> Everyday brings dull and flat colors to life, highlighting the most vibrant and vivid aspects of one's surroundings.

Make the most of everyday life in Prizm<sup>™</sup> Everyday and see the world in a new light filled with detail and richness of enhanced color.











RATE OF TRANSM

BASE COLOR:

BASE COLOR:

RATE OF TRANSMISSION

PRIZM™ JADE POLARIZED

AVAILABLE IN NON-POLARIZED

RATE OF TRANSMISSION: 13% [14% FOR NON-POLARIZED]

PRIZM™ ROSE GOLD

AVAILABLE IN NON-POLARIZED

POLARIZED\*\*

RATE OF TRANSMISSION: AVAILABLE IN NON-POLARIZED

BASE COLOR:

AVAILABLE IN NON-POLARIZED

PRIZM™ TUNGSTEN POLARIZED

PRIZM™ RUBY POLARIZED\*\*





PRIZM



PRIZM<sup>TM</sup> SPORT

**INCREASED CONTRAST LENS** 

Engineered to cut through glare and

what's going on below the surface.

filter the shades of blue that overwhelms

your vision in open water to help you see

Prizm<sup>™</sup> Sport lenses have turned Oakley<sup>®</sup> eyewear into vital equipment for

sports, delivering next level performance on the road, field, course, trail or water.



RATE OF

PRIZM™ LOW

LIGHT

BASE COLOR

RATE OF TRAN









































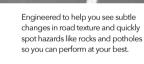




















# PRIZM™ VIOLET

BASE COLOR: RATE OF TRAN AVAILABLE IN NON-POLARIZED



POLARIZED BASE COLOR: RATE OF TRANSM AVAILABLE IN NON-POLARIZED

PRIZM™ SAPPHIRE



PRIZM™ BLACK POLARIZED BASE COLOR:

RATE OF TRANSMISS AVAILABLE IN NON-POLARIZED



RATE OF TRANSMISSIO AVAILABLE IN NON-POLARIZED



# **PLUTONITE**<sup>®</sup>

# THE DURABLE AND OPTICALLY PURE LENS MATERIAL

The lens material is designed and manufactured exclusively for Oakley®. It is made from the purest form of optical polycarbonate.

# **FEATURES**

- · More impact resistance than other lens materials
- · 20% lighter than plastic or glass lenses
- · UV Protection

# **BENEFITS**

- · Ideal for sport and athletes
- · Lightweight
- · 100% UV protection without an additional coating

# **PLUTONITE**<sup>®</sup>

# **UV PROTECTION**

Plutonite<sup>®</sup>, Oakley<sup>®</sup>'s patented lens material, is built to protect eyes against harmful ultraviolet (UV) radiation from the sun's thermonuclear furnace.

# **FEATURES**

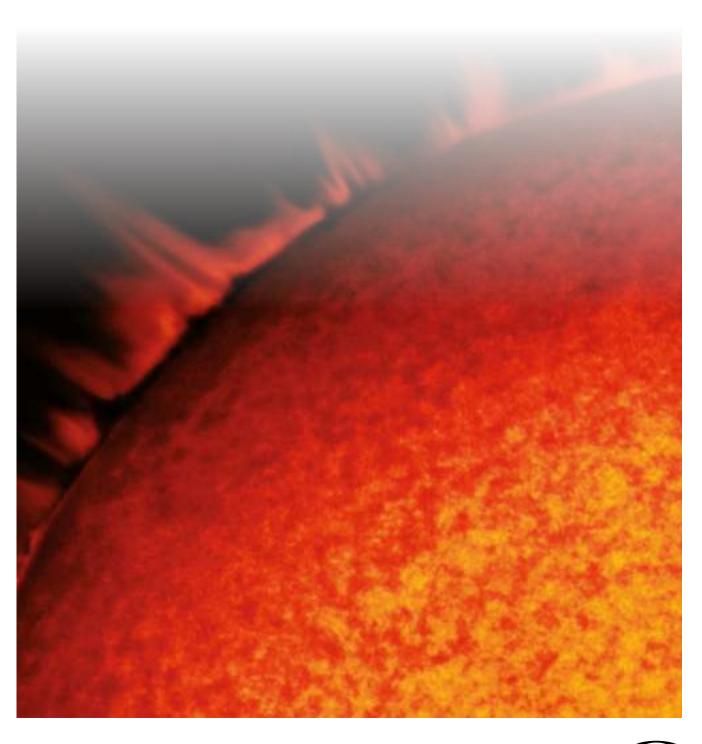
· Inherent in the lens material

wavelength of UV radiation

- · 100% protection against every
- **BENEFITS**

# Plutonite. It can only be found one place on earth.







NOTE - IMAGES SIMULATED FOR ILLUSTRATIVE PURPOSE

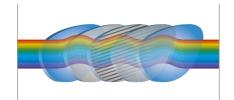
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· 100% protection throughout the entire lens · Blocks 100% of UVA and UVB rays up to 400nm



# OAKLEY<sup>®</sup> HD POLARIZED<sup>TM</sup>

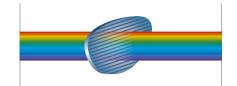
# **A SINGLE LENS THAT ELIMINATES GLUE AND FILMS**



**COMPETITOR** Conventional lenses are made from multiple layers

and use glue to bond them together.

They can also be manufactured at different times without precise alignment of the axis of polarization. These mismatched pairs result in compromised glare protection and clarity, putting you at greater risk of eye strain and headaches.



# OAKLEY HD POLARIZED<sup>TM</sup>

Only one layer, no glue: the recipe for superior optical performance.

Both lenses in a single pair of Oakley sunglasses are manufactured at the same time to perfectly align and center the axis of polarization. Doing so prevents unwanted and distracting glare from sneaking through any part of the lens.

# **IRIDIUM**<sup>®</sup>

# THE COATING THAT REFLECTS LIGHT

Oakley<sup>®</sup> Iridium<sup>®</sup> is a special metal oxide coating on the lens designed to give a unique look.

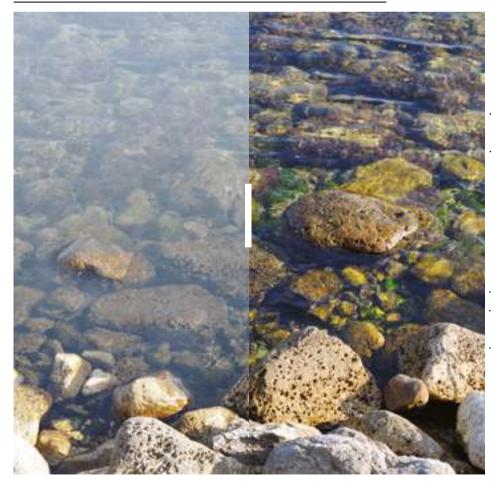
# **FEATURES**

Colorful lens coating that gives you a unique aesthetic

# **BENEFITS**



# **BLOCKS 99% OF GLARE**



# **FEATURES**

A single lens that eliminates glue and films Perfectly aligned axis of polarization

# BENEFITS

Blocks 99% of reflecting glare Minimizes eye strain with unmatched clarity Improves depth perception, contrast, safety and comfort

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· Iridium<sup>®</sup> lens coatings reflect certain colors, while working with the lens base tint to provide balanced light transmission

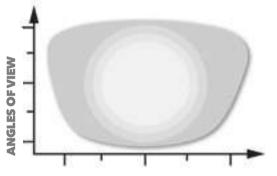
# **OAKLEY<sup>®</sup> TRUE DIGITAL<sup>™</sup>**

# **TAKE THE LIMITS OFF PRESCRIPTION**

Oakley True Digital<sup>™</sup> (OTD<sup>™</sup>) technology, a digital freeform design, optimizes vision, minimizes blurring and reduces peripheral distortions with innovations designed to answer the uncompromising demands of world-class sports professionals.

With consistent power control across the entire field of view, OTD<sup>™</sup> reduces power error (the change in the optical power of the lens as you look through various points).

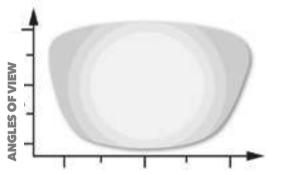
Oakley True Digital freeform technology is offered in both prescription sun and optical styles.



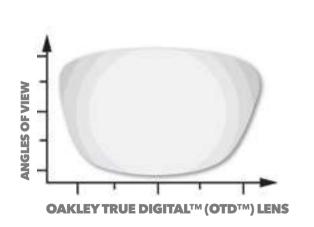
**CONVENTIONAL SPHERIC LENS** 



**CONVENTIONAL SPHERIC LENS** 



**CONVENTIONAL ASPHERIC LENS** 



Distortion caused by Oblique Astigmatism





OAKLEY TRUE DIGITAL<sup>TM</sup> (OTD<sup>TM</sup>) LENS

YDISTORTION IS SIMULATED - FOR TRAINING PURPOSES ONLY AS \$1400ABUIN \$1/ #PLLIS PRESCRIPTIONS WITH LESS THAN .25D OF ASTIGMATISM

# **HIGH-WRAP FRAMES**

# **IN HIGH PRESCRIPTIONS**

Oakley<sup>®</sup> True Digital<sup>™</sup> (OTD<sup>™</sup>) expands the prescription range for Oakley high-wrap frames and reduces thickness up to 40% for a comfortably light lens - offering the best performance solution possible.

This technology uses what we know about frame tilt, wrap, and vertex distance to optimize your doctor's prescription for your frame on your face.

# **CHOOSE FROM SEVEN LENS DESIGNS THAT FEATURE OAKLEY TRUE DIGITAL**

- SV Standard and SV High RX
- PAL Standard and PAL High RX
- · PAL Sport-Specific (Golf, Cycling, Fishing)







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30 • OAP

# **OAKLEY<sup>®</sup> SHIELDS WITH RX INSERTS**

# **PRESCRIPTION SHIELD SOLUTION**

Using shield insert technology, the prescription is glazed on two separate lenses which are placed into the shield to provide corrected vision.

Available in the following Standard Lens Colors:



BLACK IRIDIUM® / BLACK IRIDIUM® POLARIZED



GREY/GREYPOLARIZED



CLEAR

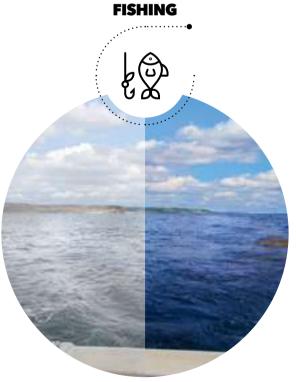


# **SOLUTIONS FOR SPORT**

# **A COMPREHENSIVE SPORTS OFFERING**

Oakley<sup>®</sup> sports performance eyewear is designed to meet the uncompromising demands of world-class sport professionals by merging Oakley Prizm<sup>™</sup> Sport lens tints, protective coatings, digital surfacing technology, frame technologies, and progressive lenses optimized for specific sports and other outdoor activities.





OAKLEY AUTHENTIC PRESCRIPTION SUN





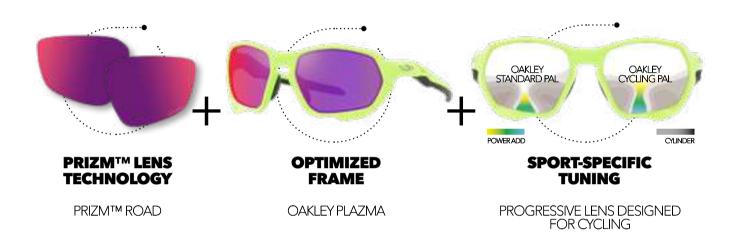
# **SPORT-SPECIFIC** CYCLING

# **CLEARLY SEE THE ROAD TO VICTORY**

When cycling, the athlete's head position and visual environment create unique optical demands that may not be met by standard progressive sun lenses. As a brand with a deep-rooted history in cycling, Oakley® set out to solve this problem.

Designed as a solution for cyclists, Oakley<sup>®</sup> offers the OTD<sup>™</sup> Sport-Specifc progressives for cycling - built to create sharp vision at a rider's natural head position (chin down, eyes rotated up) to help see the road ahead, and to give riders a clear view of the bike's computer without distraction of the road's obstacles.

Oakley progressive cycling lenses are best paired with the Prizm<sup>™</sup> Road or Prizm<sup>™</sup> Trail lens in an ideal performance frame, such as Field Jacket and Racing Jacket.





# **THE PROBLEM**

# **STANDARD PAL LENS**

A cyclist's head position and visual environment create unique optical demands that are not met by standard progressive sun lenses.

# **STANDARD PALLENS**

TUMP

# **ELECTRONIC ZONE**

A focused cycling-specific near zone allows the rider a clear view of the bike computer.

# **ROAD ZONE**

A cycling-specific intermediate zone provides sharp vision to help the rider see obstacles on the road.

SUN

NOTE - IMAGES SIMULATED FOR ILLUSTRATIVE PURPOSE

# **THE SOLUTION**

**OAKLEY CYCLING PAL LENS** 

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Using proprietary technology, Oakley® delivers a progressive lens specifically designed for cyclists.

# **OAKLEY CYCLING PAL LENS**

# **RIDING ZONE**

A cycling-specific distance zone, up to 20° above the fitting cross, provides sharp vision at a rider's natural head position: chin down, eyes rotated up.

Oakley Authentic Prescription • 35

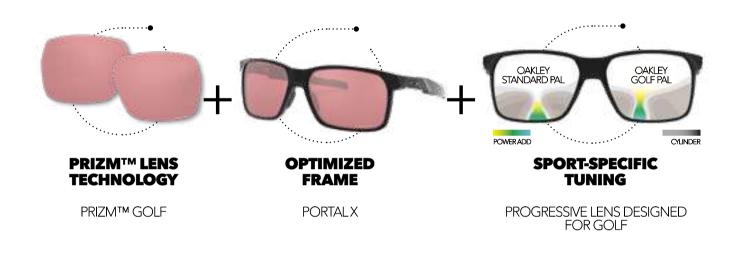
# **SPORT-SPECIFIC** GOLF

# **DESIGNED FOR BIRDIES**

From the fairway to the green, there are various vision challenges golfers can experience during their 18-hole round.

Designed around the specific needs of golfers, Oakley® offers the OTD™ Sport-Specifc progressives for golf - incorporating a wide vision zone to provide crisp vision while golfers track the ball down the fairway, an intermediate zone to allow golfers to hit the ball with a more natural head posture, and a near zone for filling out the scorecard.

Oakley progressive golf lenses are best paired with a Prizm<sup>™</sup> Golf or Prizm<sup>™</sup> Dark Golf lens in a frame designed with golfers in mind, such as Targetline.





# **THE PROBLEM**

# **STANDARD PAL LENS**

A golfer's posture, environment and vision demand a unique lens solution not met by standard progressive sun lenses.

# **STANDARD PAL LENS**

# SCORECARD

A golf-specific near vision zone allows the golfer to clearly see the scorecard.

# **PUTTING ZONE** A long and even golf-specific intermediate vision zone allows

the golfer to hit the ball with a more natural head posture.

SUN

AKLEY AUTHENTIC PRESCRIPTION

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# **THE SOLUTION OAKLEY GOLF PAL LENS**

Using proprietary technology, Oakley<sup>®</sup> delivers a progressive lens specifically designed for golfers.

# **OAKLEY GOLF PAL LENS**

# **FAIRWAY ZONE**

A wide golf-specific distance vision zone, delivers crisp vision above the fitting point allowing the golfer to easily follow the ball down the fairway.

# **SPORT-SPECIFIC** FISHING

# **SCAN, CAST & SPOT FISH WITH EASE**

An angler's environment and lines of sight create unique optical demands normally not met by standard progressive sun lenses.

Designed as a solution for anglers, Oakley<sup>®</sup> offers the the OTD<sup>™</sup> Sport-Specifc progressives for fishing incorporating a vision zone built to see far off in the distance to scan, cast and spot fish, as well as a vision zone built to see close-up details like baiting a hook or tying a fly.

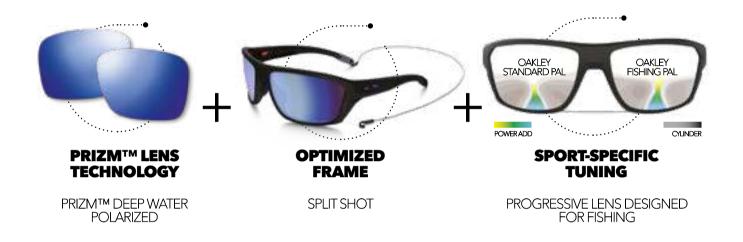
Oakley progressive fishing lenses are best paired with the Prizm<sup>™</sup> Deep Water Polarized lens in a high-wrap frame optimized for fishing, such as Split Shot.

# **THE PROBLEM**

# **STANDARD PAL LENS**

An angler's environment and lines of sight create unique optical demands that are not met by standard progressive sun lenses.

**STANDARD PAL LENS** 





# **BAITING ZONE**

A wide fishing-specific near vision zone makes baiting easier for the large variety of fishing demands.

# **FISHING ZONE**

A fishing-specific intermediate vision zone allows the fisherman to fish with a more natural head posture.

NOTE - IMAGES SIMULATED FOR ILLUSTRATIVE PURPOSE

# AKLEY AUTHENTIC PRESCRIPTION

# **THE SOLUTION**

**OAKLEY FISHING PAL LENS** 

Using proprietary technology, Oakley® delivers a progressive lens specifically designed for fishing.

# **OAKLEY FISHING PAL LENS**

# **CASTING ZONE**

A wide fishing-specific far vision zone delivers crisp vision across the distance providing the details to scan, cast and spot fish.

# **HIGH-QUALITY LENS TREATMENT**

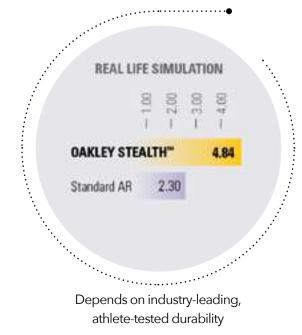
Recognizing the rigors of an active outdoor lifestyle, Oakley developed Stealth<sup>™</sup>, an anti-reflective (AR) coating engineered for the needs of athletes and sports enthusiasts. Designed to combat the dirty, scratch-prone lenses that become an inevitable part of sport and life, Oakley Stealth<sup>™</sup> is an AR coating on the interior and exterior surface of the lens that helps provide: glare reduction, while also repelling smudges, body oils, water and dust to help your lenses stay cleaner longer.

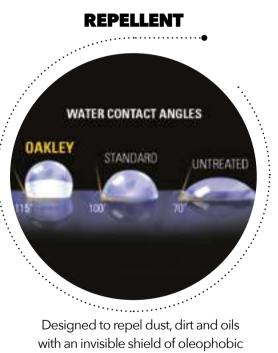
# **REFLECTION & GLARE**



Designed to reduce disturbing internal reflections and glare that can cause eye fatigue and discomfort

# DURABILITY





and anti-static protection









# HYDROPHOBIC

Shed the water weight. Oakley Stealth™ is designed with an invisible shield of hydrophobic, water-resistant, protection to help resist the build-up of water-based moisture, like sweat and raindrops, on the lens surface that can lead to optical distortion.



# OLEOPHOBIC

Easy to clean and keep clean. Oakley Stealth™ features an invisible shield of oleophobic, oil-resistant, protection to help make your lenses more resistant to fingerprints and smudging from facial oils.

# **ANTI-STATIC**

Dust is everywhere. Oakley Stealth™ is designed with an invisible shield of antistatic protection to help prevent dust, dirt and other particles from sticking to your lenses.



# **INNER GLARE REDUCTION**

Combat eye fatigue and discomfort. Oakley Stealth™ is designed to reduce disturbing glare and halos experienced on sunny days or from bright headlights at night.







# **ABBE VALUE (CHROMATIC ABERRATION)**

Is the measure of the lens material's chromatic dispersion (variation of refractive index versus wavelength), Abbe numbers are used to classify optical lens materials in terms of their chromaticity. See lens material chart.

### ABERRATION

Optical system image defects; rays of light emanating from an object-point fail to form a perfect image-point. There are different types of aberrations. Spherical, Toric, Chromatic, Vertical and Horizontal. Chromatic aberration is increasing with the index of the lens material and is expressed in the Abbe number.

### ACCOMMODATION

The eye's ability to automatically change focus from seeing at one distance to seeing at another.

## **ADDITION (ADD POWER)**

In an eyeglass prescription, The optical power (of a lens) required for near vision, in addition to that required for far vision. This is dominantly done with PAL (Progressive Additional Lens) but used to be done with bifocals. The addition is expressed in Diopters ranging from + 0.75 up to +3.50 diopters.

#### **AMBLYOPIA**

Also known as lazy eye, Amblyopia is a vision development disorder in which an eye fails to achieve normal visual acuity, even with prescription eyeglasses or contact lenses.

# **AMETROPIA**

Refers to vision disorders (myopia, hyperopia, astigmatism) characterized by the eyes inability to correctly focus the images of objects on the retina, thus resulting in blurry vision.

## **ANTI-REFLECTIVE (AR) COATING**

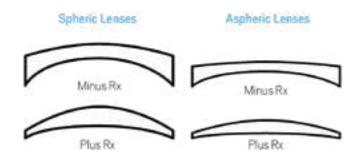
A type of optical coating applied to the surface of the lens to help reduce front and backside lens reflections. AR coatings help improve vision, reduce eye strain and make eyeglasses look more cosmetically pleasing.

### ANTI-STATIC

Helps prevent/keep dust, dirt and other particles from sticking to your lenses.

#### **ASPHERIC LENS**

Have a more complex front surface that gradually changes in curvature from the center of the lens out to the edge - unlike a Spherical (aka Conventional) lens that has the same curve across its entire surface. Advanced optical design technology allows aspheric eyeglass lenses to be made with flatter curves than conventional lenses, giving them a slimmer, more attractive profile.

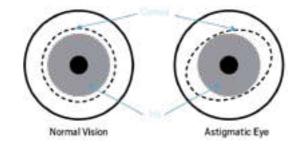


**AS WORN POSITION** 

See position of wear.

## **ASTIGMATISM**

A common sight defect that causes blurred vision as a result of an irregularly shaped cornea. Astigmatism occurs when your eye can't focus light evenly onto the retina because your cornea, the clear round dome that covers your iris and pupil, and your lens, are irregularly shaped. Unlike nearsightedness or farsightedness, astigmatism affects your vision at any distance.

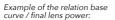


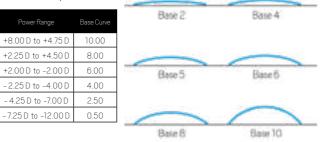
#### AXIS

In an eyeglass prescription, the Axis refers to the orientation of the astigmatism. If cylinder power is prescribed, the axis, or angle between 1 and 180 degrees, must also be specified.

# **BASE CURVES**

The front side curvature of a lens is expressed as a base curve value. This value is adapted to the desired final power of the lenses (except for Oakley True Digital sun lenses which are always identical to the sun (plano) version). Base 0 = flat. The higher the number, the steeper the curve.





#### BEVEL

The shaping of the edge around the periphery of a lens necessary to hold the lens within the groove of a specific c frame.

### **BIFOCAL LENS**

A lens with two distinct focal points, one for distance vision (upper focal point) and the other for near vision (lower focal point).

#### **BLUE LIGHT FILTER**

Helps block harmful UV rays and HEV (High Energy Visible) light that can lead to retinal damage and premature cataracts. Some lenses are designed to block these harmful rays to help reduce these risks.

#### **BLUE LIGHT**

Visible blue light is the portion of the visible light spectrum with the shortest wavelengths and highest energy (400-500nm). Sunlight is the main source of blue light but there are also many manmade sources of blue light, including display screens on digital devices. Eyes are not very good at blocking blue light, virtually all visible blue light passes through the cornea and lens and reaches the retina, which could lead to digital eye strain, increased risk of macular degeneration and premature cataracts.



# CATARACT

The clouding of the lens in the eye that affects vision and can potentially lead to blindness. Most cataracts are related to aging and cannot spread from one eye to the other.

### COATINGS

Applied to corrective lenses after surfacing. Various types of coatings exist, like anti-reflective, anti-static, hydrophobic, etc.

# **CONCAVE LENS**

A spectacle lens which is thicker at the edges than in the center. A concave or "minus" lens diverges (decreases) the power of incoming light rays, and is used in the correction of myopia (nearsightedness).

#### CONSTRINGENCY

Another name for Abbe.

# **CONTACT LENSES**

A thin plastic lens placed directly on the surface of the eye to correct visual defects.

#### CONVERGENCE

Reflex that enables the eyes to focus on a single point in near vision.

# **CONVEX LENS**

A spectacle lens which is thicker in the center than at the edges. A convex or "plus" lens adds optical power to incoming light rays used in the correction of hyperopia (farsightedness).

#### CORNEA

The transparent front part of the eye that covers the iris, pupil, and anterior chamber, providing most of an eye's optical power.

# **CORRECTIVE LENSES**

A lens typically worn in front of the eye to improve vision.

### CYLINDER (CYL)

In an eyeglass prescription, CYL refers to the amount of lens power required to correct for astigmatism. The number in the cylinder column may be preceded with a minus sign (for the correction of nearsighted astigmatism) or a plus sign (for farsighted astigmatism). If this space is left blank, then the patient doesn't have astigmatism.

# **DIGITAL SURFACING TECHNOLOGY (D.S.T)**

The most advanced way to produce optical complex surface at the back side of the semi-finished lens. Precise surface cutting using single point turning; cutting tool computer controlled allowing to give all the compensations needed on the back surface of the lens. This allows full lens design taking into account multiple parameters to o set prismatic error and offering the best visual performance possible. This also has the next level of personalization, since the design is specifically made to customer's unique prescription.

# DIOPTER (D)

Unit of curvature or "power" for a prescription lens - the higher the number, the higher the power. Diopters are most commonly written in quarter increments (0.25, 0.50, 0.75, etc.). The sphere, cylinder, add, prism, and base curve in a prescription are all expressed in diopters.

GLOSSARY



# **EMMETROPIA**

Refers to an eye with no visual defects, therefore, no need for vision correction. Emmetropia is the opposite of ametropia.

# **EFFECTIVE POWER**

See vertex power.



# FACE FORM

The gentle wrap of a frame front necessary to parallel the roundness of the head.

# **FIXED CORRIDOR**

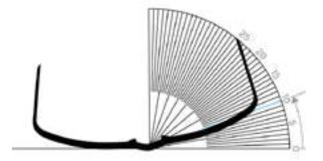
Type of progressive design that allows to put the focus on the reading by controlling the location of the "add" in relationship to the pupil; much like you would with a fl at top. Today's Oakley fixed digital design offers one design, using a 17mm fit height.

# FOVEA

A tiny pit located in the center of the macula of the retina that is responsible for sharp central vision and where visual acuity is highest.

# **FRAME WRAP ANGLE**

Also known as face form angle and panoramic angle, describes



the horizontal angle of the lens plane in front of the eyes.

# FREEFORM

Synonym of D.S.T. (Digital Surfacing Technology).



# **GLAUCOMA**

A disease associated with increased pressure of the fluid of the eye. The condition damages the optic nerve that may lead to blindness. May be treated with medication drops and/or surgery.



# **HD POLARIZED™**

Oakley HD Polarized<sup>™</sup> is a single lens that eliminates glue and films. Both lenses in a single pair of Oakley sunglasses are manufactured at the same time to perfectly align and center the axis of polarization. Doing so prevents unwanted and distractive glare from sneaking through any part of the lens.

# HEV (HIGH ENERGY VISIBLE)

High Energy Visible light, which includes Blue Light, refers to the rays between 380 nanometers (nm) and 500 nm. HEV is located in the visible light spectrum and may cause some irreversible damage to the human eye. The sun is over 100x stronger than any digital device.

# **HYDROPHOBIC COATING**

Water-resistant, protection to help resist the build up of water based moisture, like sweat and raindrops, on the lens surface that can lead to optical distortion.

# **HYPEROPIA**

Farsightedness; the ability to see distant objects more clearly than close objects; may be corrected with glasses or contact lenses.

# INDIVIDUALIZED LENSES

Lenses that are tailored to the wearer's anatomy and to the fit of the frame give better than ever vision and comfort. These "individualized" or "as worn" or "personalized" lenses are not likely to give the best results unless measurements are taken. These could be supplied by the optician or, provided be the frame manufacturer. There are several individualized measurements such as the wrap angle, pantoscopic angle, lens base curve and in some cases the vertex distance (eye to lens distance). These lenses can only be produced with the D.S.T / Freeform technology.

# **IRIDIUM**<sup>®</sup>

Oakley Iridium<sup>®</sup> is a special metal oxide coating on the lens designed to reflect light while providing a colorful and unique aesthetic. Iridium lens coatings reflect certain colors, while working with the lens base tint to provide balanced light transmission.

# IRIS

A thin, circular structure in the eye, responsible for controlling the diameter and size of the pupil and thus the amount of light reaching the retina. Eye color is defined by that of the iris.



### LENS MATERIALS

See chart below. Lens materials, (Abbe Value and UVA may vary by Region.)

Refractive Index	Organic Materials	Abbe Value	Specific Gravity	Reflectance %	UV (nm)	UVA %	UVB %
1.50	CR-39	58	1.32	7.7	355	90	100
1.59	Plutonite™ (Polycarbonate)	31	1.21	9.6	385	100	100
1.60	MR-8	41	1.30	10.1	400	100	100
1.67	MR-10	31	1.37	11.8	400	100	100
1.74	MR-74	32	1.47	13.6	400	100	100



# MYOPIA

Nearsightedness; the ability to see close objects more clearly than distant objects. People with myopia can typically see well enough to read a book or computer screen but struggle to see objects farther away.



## NANOMETER (nm)

A unit of length used to measure the wavelength of light.

# 0

# **OC HEIGHT**

'Optical Center' (OC) or 'Fit Point' is a measurement that can be used to specify the vertical placement of a single vision lens' center point within a specific frame. OC or Fit Point height measurement is mandatory for all OTD<sup>™</sup> single vision lenses.

# **OCULAR GLOBE**

The eyeball, about 25mm in diameter when emmetropic.

# OD

Oculus dexter, which is Latin for "right eye".

# **OLEOPHOBIC COATING**

Oil-resistant protection to help make lenses more resistant to fingerprints and smudging from facial oils.

### **OPHTHALMOLOGIST (M.D.)**

Physician, surgeon specialized in the treatment of eye diseases, conditions and eyesight correction.

## **OPTICAL CENTER**

The point on an optical lens where the light passes directly through without bending. The thickest point of a plus lens and the thinnest point of a minus lens.

### **OPTICAL CORRECTION**

Combination of the curvatures of the front and rear surfaces of a lens, measured in diopters.

# **OPTICIAN**

Eye care professional, designs and adapts eyeglasses in accordance with measurements specific to each wearer.

### **OPTOMETRIST (O.D.)**

Eye care professional, conducts refractive examinations, fits contact lenses and assesses overall eye health.

# **ORGANIC/PLASTIC LENSES**

Organic lenses are made from a "polymerized" resin.

# OS

Oculus sinister, which is Latin for "left eye".

### **OTD**<sup>™</sup>

Oakley's digitally surfaced lenses. OTD<sup>™</sup> stands for Oakley True Digital<sup>™</sup>.

# OU

Oculus uterque, which is Latin for "both eyes".

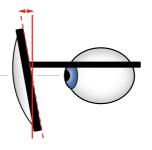


PANORAMIC ANGLE

See frame wrap angle.

# **PANTOSCOPIC ANGLE (OR TILT)**

The rotation of lens bottom towards the cheeks. Usually, the angle (or tilt) ranges from 0-12 degrees, and anything within 3-7 degrees



#### is considered normal. PUPIL DISTANCE (PD)

The distance from the center of one pupil to the center of the other pupil. Measured in millimeters (mm). Used for proper positioning of eyeglass lenses in front of the eye. This measurement can be taken for distance viewing (for PD) or near viewing (near PD).

# PERSONALIZED LENSES

See individualized lenses.

## PHOTOCHROMIC

A type of lens that has the ability to automatically darken when exposed to UV light. The lens transitions back to the clear state as UV light diminishes.

# PLANO LENS

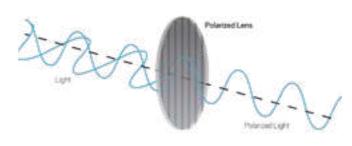
Plain lens material blank with no prescription corrective power.

# **PLUTONITE**<sup>TM</sup>

A type of lens material that is designed and manufactured exclusively for Oakley. It is made from the purest form of optical polycarbonate and characterized by lightness, high impact resistance, high refractive index (clear crisp vision), and UV absorption - it blocks 100% of UVA, UVB & UVC rays.

### **POLARIZED LENSES**

A lens design to reduce reflective glare (i.e.: light reflected o the water). When light is reflected from fl at surfaces, it tends to become polarized – meaning it travels in a more uniform (usually horizontal) direction. Polarized lenses contain a special filter that blocks this type of intense reflected light, reducing glare.



# POLYCARBONATE

A type of lens material characterized by lightness, impact resistance, high refractive index, UV absorption.



GLOSSARY

# **POSITION OF WEAR (POW)**

The 'position of wear' or 'as worn position' is used to describe the way that an eyeglass frame positions lenses in front of the eye. When the tilt, faceform and vertex distance of lenses change in front of the eye, the effective power of the lens also changes as well as vision through the lens' periphery. It's no longer the actual prescription.

# POWER

The property of a lens to bring light rays to a focus. High optical power corresponds to short focal length.

# **POWER ERROR**

The change in the power of a lens as the eye looks through various points of the lens.

# PRESBYOPIA

Age-related farsightedness. A gradual, age-related loss of the eyes' ability to focus actively on nearby objects. Caused by the aging of the crystalline lens, which with time thickens and loses its suppleness. As the crystalline lens becomes more rigid, it changes shape less easily and the subject sees less and less well in near vision. Occurs typically in middle and old age (noticeable in the early to mid-40s and worsens until around age 65).

# PRISM

Prism is very rare and helps patients see a single image when they would otherwise see double. The amount of prism listed is also measured in diopters.

# PRIZM LENS TECHNOLOGY™

Oakley's revolutionary technology, Prizm<sup>™</sup> lenses filter the correct wavelengths of light to create an optimized experience. Through an understanding of the complex way the eye interprets color, Oakley is able to engineer lenses that enhance detail by fine-tuning the specific wavelengths of light that make the eye perceive color more vividly.

# **PROGRESSIVE LENSES**

Corrects presbyopia by varying optical power progressively from an upper to lower part. Have no visible segment lines on the lens surface. Helps eliminate image-jump in vision.

# PUPIL

Central opening of the iris through which rays of light enter the eye. The diameter depends on ambient light. Light enters the eye through the pupil, which usually appears black, and the iris regulates the amount of light by controlling the size of the pupil.



# REFLECTANCE

Capacity of a given material to reflect the light. Usually, the higher the index, the higher the reflectance and, therefore, the need to have a performing anti-reflective (AR) coating.

# **REFRACTIVE INDEX**

Characterizes the way a transparent optical material bends or refracts light. The higher the index, the thinner the lens and the higher the chromatic aberrations deteriorate the image quality.

# RETINA

Ultra-sensitive membrane of the inside of the back of the eye. The retina is where the vision process starts - It is here that objects are focused and then transmitted via the optic nerve to be interpreted by the brain.





OAKLEY AUTHENTIC

GLOSSARY

# **SEG HEIGHT**

Segment height is a measurement used to specify the vertical placement of the add power segment of a multi-focal lens within a specific frame.

# **SEMI-FINISHED LENSES**

Only one side of the lens, usually the front side, is finished. The second side, usually the backside , must yet be surfaced in order to bring the lens to its desired power and thickness.

# SINGLE VISION LENSES

A lens having one optical center and power. The prescription power is the same over the entire lens and used for correcting nearsightedness (myopia) or farsightedness (hyperopia).Believed to be the most common type of prescription lens.

# SPHERE (SPH)

In an eyeglass prescription, SPH indicates the amount of lens power, measured in diopters (D), prescribed to correct nearsightedness or farsightedness. If the number appearing under this heading has a minus sign (-), you are nearsighted; if the number has a plus sign (+) or is not preceded by a plus sign or a minus sign, you are farsighted.

# **SPHERICAL LENS**

A simple lens with a front surface that is shaped similar to a sphere, meaning it has the same curve across its entire surface, much like a baseball. Also referred to as a conventional lens.

# **STOCK LENS**

An unedged ophthalmic lens with both surfaces finished to specific vertex power(s) supplied from the lab.

#### **STRABISMUS**

A disorder in which the eyes don't look in the exact same direction at the same time due to poor eye muscle control. One eye may look directly forward while the other is turned away. Most common in children. Correction may be eyeglasses, vision therapy or surgery.

#### **SURFACING (DIGITAL)**

See Freeform Surfacing.

# **SURFACING (FREEFORM)**

The process of using a "freeform" generator and polisher to cut and polish lens surfaces of virtually unlimited complexity.

#### **SURFACING (TRADITIONAL)**

The grinding and polishing of a lens surface.

# SPECTACLE

An optical device used to corrective vision defects. Composed of two lenses, usually corrective lenses, that are held together by a frame.



# TINTS

A lens of a specific color and hue for therapeutic and/or cosmetic effect. Tints may be a variety of different hues with the same coloration density which determines how much opacity of color is present.

# **TORIC LENS**

A toric surface is ground with two different curves at right angles to each other with the weaker of the two curves located on the cylinder's axis. Toric lenses are often used to correct astigmatism.

### **TRANSITIONS**\*

Transitions is an Essilor brand that creates a variety of photochromic lens designs.

# TRANSMITTANCE

The amount of light that is able to pass through the lens and reach the eye.

# TABO

The most commonly used cylinder axis system in the ophthalmic optics. A Tabo chart is used to determine the degrees of the cylinders when looking at the eyeglass wearer. Also can be used to determine the direction of the base of a prismatic compensation.

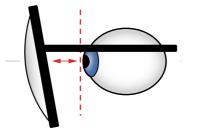


# ULTRAVIOLET (UV) LIGHT

Invisible rays given o by radiant energy (most of the natural UV light people encounter comes from the sun). Ultraviolet (UV) light falls in the range of the electromagnetic spectrum between visible light and X-rays (10 nm to 400 nm). Over exposure to UV radiation is damaging to living tissue, including eyes. UVA (315-400 nm), UVB (280-315 nm) and UVC (180-280 nm).

# **VARIABLE CORRIDOR**

In progressive lenses, variable corridors prioritize the quality of the distance and intermediate area by optimizing the lens based upon the specifications of the Rx, frame measurements, and seg height. Benefits can include improved peripheral vision and an increase in the width of the intermediate and reading areas.



# VERTEX DISTANCE

The distance (mm value) between the back surface of a lens and the front of the cornea of the wearer. The notion is used in some position of wear individualized lenses.

# **VERTEX POWER**

The total power of a lens expressed in dioptric value in all meridians.

# **VISIBLE LIGHT**

The part of the electromagnetic spectrum that is visible to the eye.

### **VISUAL ACUITY**

The clarity or sharpness of vision and the ability to distinguish details and shapes of objects; also called central vision.20/20 vision is a term used to express normal visual acuity. If you have 20/20 vision, you can see clearly at 20 feet what should normally be seen at that distance. If you have 20/100 vision, it means that you must be as close as 20 feet to see what a person with normal vision can see at 100 feet.









