

3M Press-On™ Optics



Fresnel Optics

for Eye Care Professionals



3M™ Press-On™ Optics

3M Press-On Optics offer eye care professionals the ability to correct several visual disorders in a simple, therapeutic, inexpensive way - sometimes in just one sitting, sparing the patient multiple sessions. This immediate correction is more comfortable and cosmetically appealing without adding any noticeable weight or thickness to the spectacle, nor causing damage.



The 3M Press-On Optics system is easy-to-use, inexpensive and quick for creating prismatic and spherical corrections to existing eyewear. By applying a Press-On sphere or prism to the back surface to one or both of the patient's lenses in its entirety or to a specific region correction is immediate. These economical, easy-to-use optics come in a full range of 17 powers, and are only 1mm thick regardless of the prescription strength.

The Story Behind Fresnel Lenses

In 1822, Augustin Fresnel, a French engineer, articulated the principle of Fresnel Optics. The need for a lightweight, yet functional beacon of light for harbor lighthouses was critical.

A prism's angle of refraction depends only upon the angle of the surfaces and the index of refraction of the material of which the prism is made. *The angle of refraction is independent of the prism's thickness.*

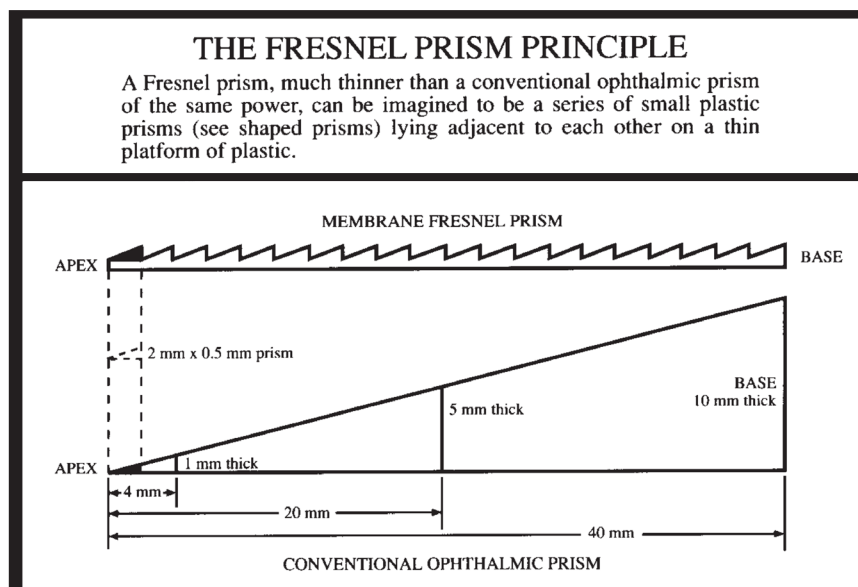
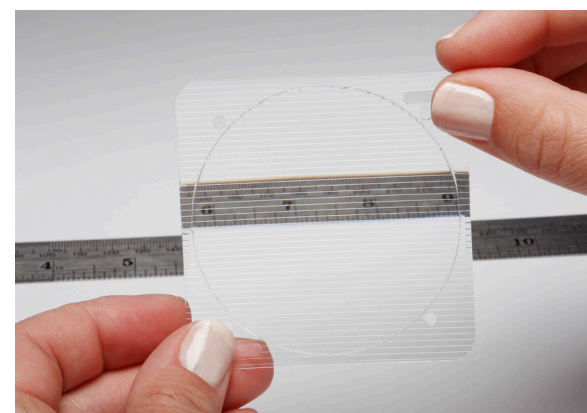


Figure 1

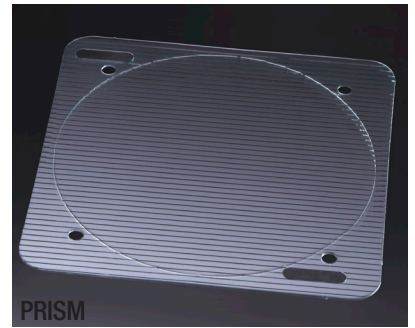
The 3M Press-On Optic, whose design is based upon the Fresnel Principle, is a thin transparent plastic sheet, with one face consisting of a series of angular grooves. Figure 1 compares a conventional glass ophthalmic prism to a 3M Press-On Optic. This diagram demonstrates how the application of the Fresnel Principle to the Press-On Optic provides a thin, lightweight lens with the comparable power of a thicker conventional ophthalmic prism.





Press-On Prisms are used to correct several ocular motility disorders. The prism pattern displaces the image. The greater the power the higher the degree of displacement.

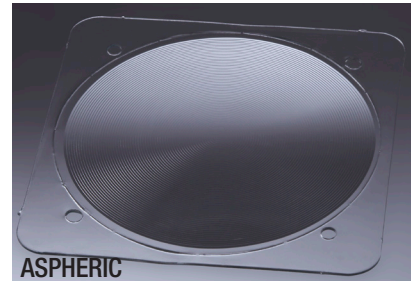
List of conditions: Strabismus (early onset, mild amblyopia, nystagmus, inoperable or incomitant), Diplopia (3rd, 4th and 6th nerve palsies; post-cataract surgery; myasthenia gravis, multiple sclerosis, graves disease), Phorias (symptomatic or decompensated phorias), Other Medical Indications (bed-ridden patients, ankylosing spondylitis other postural deformities)



PRISM

Press-On Aspheric lenses are used for refractive +/- correction. The Press-On lenses are useful for some refractive corrections.

Conditions: Diabetes Mellitus, post-cataract surgery, low vision, and accomodative esotropia.

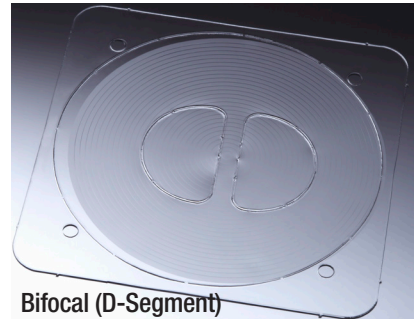


ASPHERIC



Press-On Bifocal (D-Segment) lenses are useful for some bifocal refractive corrections.

Applications: Sunglasses, reading, computer or safety glasses



Bifocal (D-Segment)

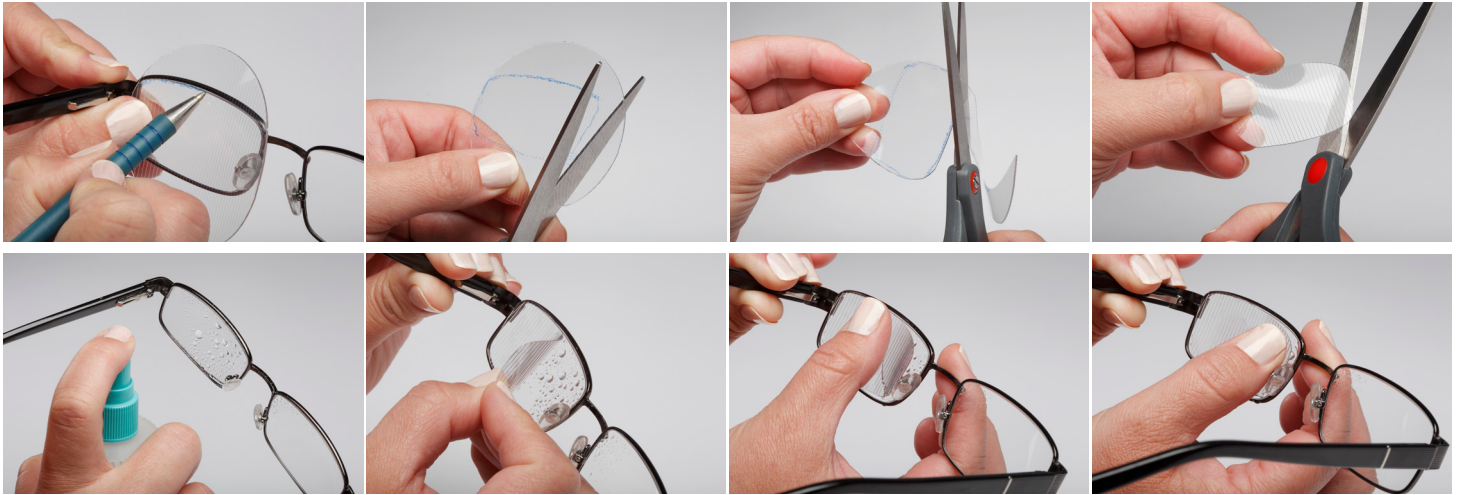
Other Uses

Recreational, Industrial, Hobby, Sports, Temporary or Long-term Corrections



Go to www.3M.com/MedTech for more technical information

How to Apply Using Water



Press-On™ Optics

ASPHERIC PLUS

+ 0.50	+ 5.00
+ 1.00	+ 6.00
+ 1.50	+ 7.00
+ 2.00	+ 8.00
+ 2.50	+ 10.00
+ 3.00	+ 12.00
+ 3.50	+ 14.00
+ 4.00	+ 16.00

PRISM

1.00 [△]	9.00 [△]
2.00 [△]	10.00 [△]
3.00 [△]	12.00 [△]
4.00 [△]	15.00 [△]
5.00 [△]	20.00 [△]
6.00 [△]	25.00 [△]
7.00 [△]	30.00 [△]
8.00 [△]	35.00 [△]
8.00 [△]	40.00 [△]

ASPHERIC MINUS

- 1.00	- 8.00
- 2.00	- 9.00
- 3.00	- 10.00
- 4.00	- 11.00
- 5.00	- 12.00
- 6.00	- 13.00
- 7.00	- 14.00

BIFOCAL

+1.00	+3.00
+1.50	+4.00
+2.00	+5.00
+2.50	+6.00

3M Medical Materials and Technologies – Trusted, Innovative, Global

For over 50 years, 3M has been a leader within Health Care. During that time, our advanced technologies have contributed to the creation of more than 10,000 new Health Care products worldwide. Working in close cooperation at every stage – from initial product concept through to component supply or actual product design – 3M Medical Materials and Technologies can link various 3M technologies to product applications and offers a carefully selected line of medical grade tapes, coatings and adhesive technologies, semi finished components together with selected bulk supplies of 3M branded products to medical device manufacturing, design and supply industries.



Medical Materials and Technologies - Optical Solutions

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