

EXTENDED DEPTH OF FOCUS IN A TRIFOCAL IOL

The RevIOL Tri-ED lens provides continuous depth of vision.

By Pavel Stodulka, MD, PhD



I am keen on searching for new and progressive ophthalmic technologies and am known to be an early adopter of many innovations, including trifocal IOLs and laser-assisted cataract surgery.

Because adding the FineVision trifocal IOL (PhysIOL) to our armamentarium revolutionized our refractive practice, I have been sure to keep a close eye on other new trifocal IOL designs.

IOL DESIGN

- The RevIOL Tri-ED is a plate-haptic hydrophilic acrylic IOL with a trifocal diffractive structure on its anterior surface.
- The IOL provides a near add of 3.00 D and an intermediate add of 1.50 D.

ACTIVE-DIFFRACTIVE OPTIC

I have had positive experiences with VSY's other products, and, therefore, when the company announced its entrance into the trifocal IOL market with the RevIOL Tri-ED (Figure 1), I was happy to give it a try. It is a plate-haptic hydrophilic acrylic IOL with a hydrophobic surface and a trifocal

diffractive structure on its anterior surface. The combination of an active-diffractive optic structure with proprietary curvature and slightly negative asphericity results in extended depth of focus for presbyopic patients (Figure 2). According to the company, the diffractive zone design creates higher modular transfer function values between the near to intermediate and intermediate to distance focusing areas compared with monofocal, bifocal, and other trifocal IOLs and clearer vision at all distances.¹ The active-diffractive optic also protects the retina by blocking pale blue light.

Because we do not yet have a true accommodating IOL, I like VSY's idea of developing the trifocal concept further. The selected disparity between near and intermediate focus (3.00 D of add for near and 1.50 D for intermediate) seems to work effectively to create sharp vision at all distances.

We are currently assessing the defocus curve and clinical results with the RevIOL Tri-ED. Initial results with this lens seem promising, and my patients have been enjoying spectacle independence in their usual daily activities. I expect more new trifocal IOLs will enter the market soon.

1. Data on file with VSY.

Images courtesy of VSY

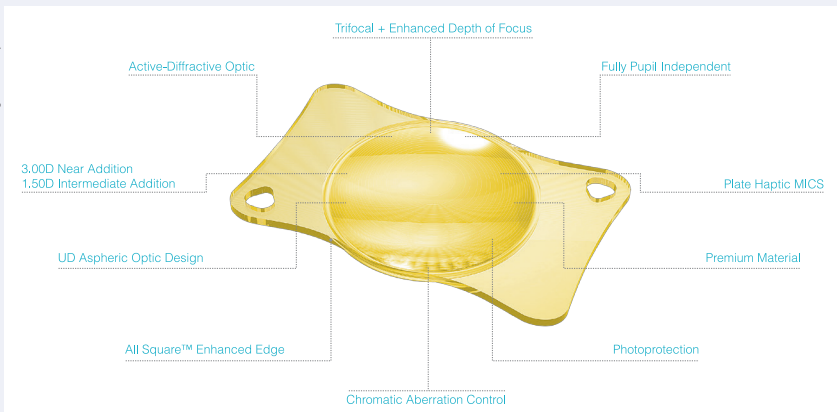


Figure 1. Features of the RevIOL Tri-ED.

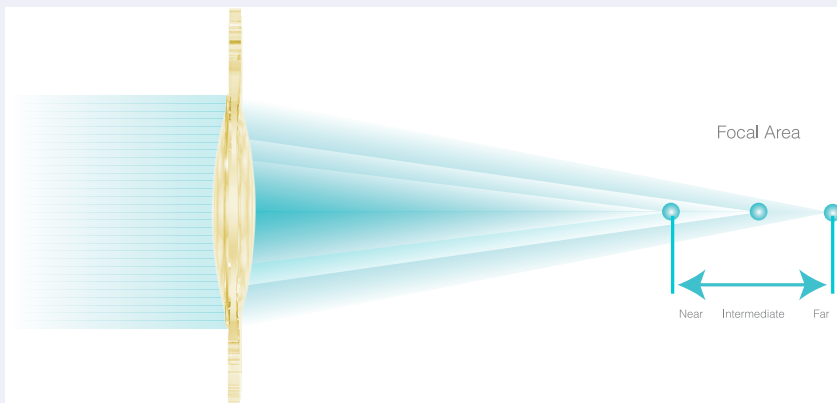


Figure 2. The RevIOL Tri-ED's active-diffractive optic results in extended depth of focus.

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■ Financial disclosure: None