

Introducing Blue Logic Lenses and Clip-Ons

May 1, we announce the world-wide launch of Blue Logic at Focal Point, Berkeley, California.

In our opinion, the blue light issue has been mis-handled by the optical industry. Many misleading claims have been made, the narrative has been inaccurate, and the issues (which are quite real) have been improperly and inadequately addressed. BlueLogic will revolutionize the way that blue light is "managed".

What is blue light?

- Blue light are wavelengths between 400 & 500nm.

What issues does blue light cause?

- The shorter wavelengths (400-430nm) cause glare and visual discomfort. Electronic devices (computers, smartphones, laptops and tablets), industrial lighting and oncoming car headlights are common sources of these wavelengths
- Longer wavelengths (435-455nm) are known to potentially adversely impact macular health, however, only the intensity of outdoor light is a known factor, at this time.
- Longest blue light wavelengths (459-484nm) are known to disrupt our natural circadian sleep cycle, by suppressing the human body's production of Melatonin, a naturally occurring hormone that is secreted by the pineal gland to prepare the body for restorative sleep.

How do current blue light solutions work?

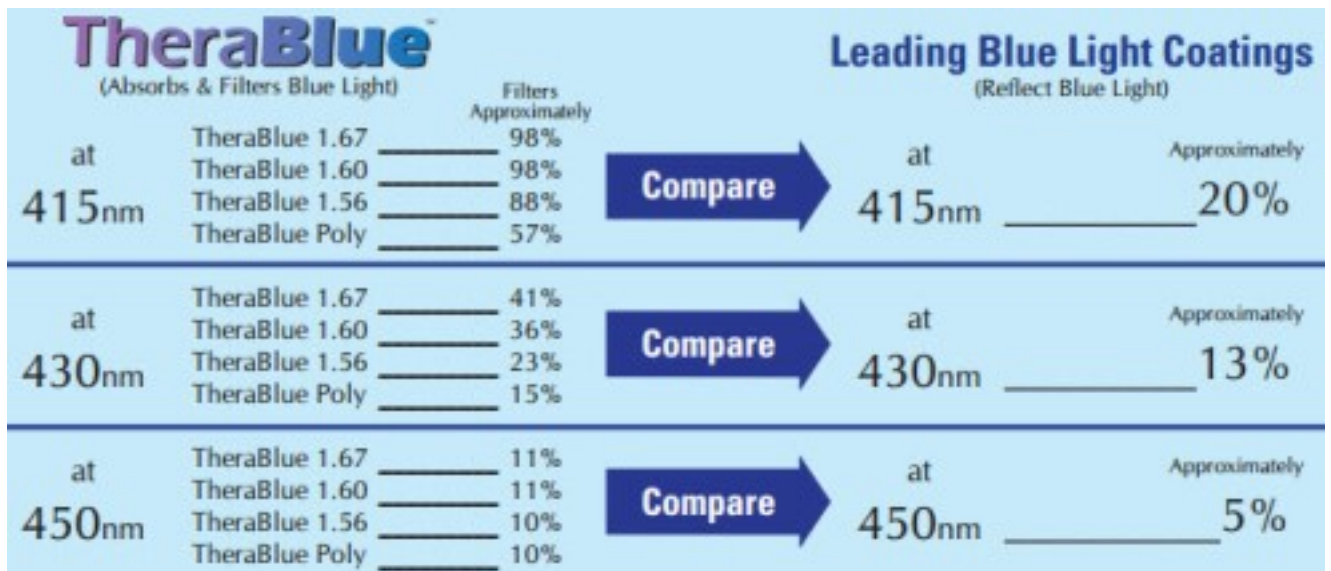
The current optical products may be categorized as follows:

- Blue-Light reflective coatings (Previncia, Recharge, BlueProtect)
- Blue light absorbing monomers (Therablue, UV++)
- Melanin/OLP lenses (Blutech)

How do they work?

The coatings reflect a percentage of the shorter wavelengths away from the eye, which does reduce glare somewhat, however the spectral curve then rapidly changes which is not "natural". Further, these coatings affect color perception all the time they are worn, and when fit in the primary pair, may adversely affect the wish to see colors "naturally" (artists, graphic designers...)

The Blue Light absorbing monomers filter blue light in a similar fashion to coatings, however, the substrate (lens material) affects the filtering greatly. Take a look at Therablue’s own published data, and compare the wide range of filtering efficiency based on the material (poly, 1.56, 1.60, 1.67). This creates a bit of a bind for the ECP who may need to recommend a more expensive lens (1.67) than is required by the Rx, in order to enhance the impact on Blue Light. An ethical dilemma to be certain.



Then, there is a category of lenses that use Melanin and OLP (Ocular Lens Pigment) to absorb Blue Light, and at first glance, seem to do a better job than the coatings and the monomers. However, the approach to the overall issue is not all it could be. Let’s look at BluTech’s published information on its lenses. **You will notice that the best lens (according to BluTech) is only available in Plano (Max).** Further, there is no mention of when the lens should filter the wavelengths that impact sleep. So here’s a question – if you filter the wavelengths that prevent the buildup of Melatonin during the day, won’t you be more tired during the day than you would like? Doesn’t it make sense to ONLY wear a lens that prepares you for sleep WHEN you are actually getting ready for sleep?

BLUTECH LENS SELECTION GUIDE

**BLUTECH[®]
ULTRA**



MATERIAL:
Polycarbonate

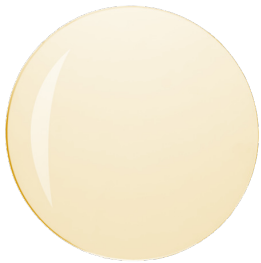
FILTRATION:
Good Indoor

BEST FOR:
Primary pair of glasses for adults and children. Safety glasses.

AVAILABILITY:
Ready-made plano & readers
Semi-finished: -11.50 to +5.50 to -4.00 cyl.
Finished Plano: a.) Hardcoat 2.0 c.t. safety; b.) AR

BPF 1

**BLUTECH[®]
CLASSIC**



MATERIAL:
Hi-Impact 1.56

FILTRATION:
Better Indoor

BEST FOR:
At risk AMD, post cataract, and post LASIK patients. Second pair of glasses for office or task-specific.

AVAILABILITY:
Semi-finished: -6.00 to +4.00, to -4.00 cyl.
Semi-finished FT 28: -6.00 to +4.00, to -4.00 cyl, +1.00 to +3.50
Finished Plano AR, 4-base
Finished SV AR 70/75mm: -3.00 to +2.00 to -1.00 cyl.

BPF 2

**BLUTECH[®]
MAX**



MATERIAL:
Polycarbonate

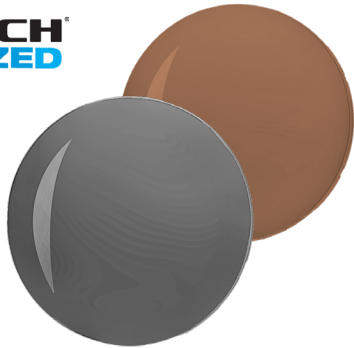
FILTRATION:
Best Indoor

BEST FOR:
Contact lens wearers and gamers not requiring prescription.

AVAILABILITY:
Finished Plano AR, 4-base

BPF 3

**BLUTECH[®]
POLARIZED**



MATERIAL:
Polycarbonate in Grey
Hi-Impact 1.56 in Brown

FILTRATION:
Best Outdoor

BEST FOR:
Primary pair of sunglasses for outdoor enthusiasts or workers wanting to read digital devices outdoors.

AVAILABILITY:
Hi-Impact 1.56 in Brown Semi-finished: -6.00 to +4.00 to -4.00 cyl.
Semi-finished FT 28: -6.00 to +4.00, to -4.00 cyl, +1.00 to +3.50
Finished Plano 6 & 8 base
Polycarbonate Grey Semi-finished: -11.50 to +5.50 to -4.00 cyl.
Finished Plano 6 & 8 base

BPF 4

BPF™ = BLUE LIGHT PROTECTION FACTOR

A measure of how well a BluTech lens will protect your eyes from blue light. The higher the factor, the higher the protection.

For more information, please contact us at info@blutechlenses.com

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.



This is why we developed BlueLogic. Working with the physicist and lead scientist at PPT (Photo Protective Technologies), we developed lenses (GlareGone and SleepProtect) that were specific to the time of day, that could be worn as clip-ons (eClips) to filter and manage blue light intelligently and allow the wearer to remove the clip and experience totally natural color through their lenses with a premium AR coating to enhance contrast. Wear BlueLogic whenever you need blue light protection, and wear the lens that is correct for the time of the day.

Accommodative stress

As opticians with over 40 years of experience, we understand that a key to comfortable vision is wearing the right lens power at the working distance. BlueLogic lenses are available with plus power so that the wearer can have the most comfortable vision at their working distance. Wearers that are 20-30 years old may benefit greatly from a +.25 or +.50, while mature progressive lens wearers will benefit from a +1.00.

No need for a progressive lens wearer to tilt their chin to access the intermediate or near, and look through a frustratingly small area. Now, the primary viewing area can be the proper power for the working distance.

For night driving, the day time clip (remember we want to preserve alertness) in plano is an excellent choice.

What about color perception?

BlueLogic uses Melanin pigment to filter blue light “naturally”, and provide a “Melanin Color Spectrum” or MCS. The use of Melanin provides the wearer with the most natural color perception possible, while providing the right blue light protection based upon the time of day. A simple tinted lens cannot provide this kind of precise color management.

Summary

- BlueLogic is a new, intelligent lens system and strategy to address the issues of blue light, while enhancing visual comfort by providing low plus power for easier focusing at the working distance.

There are 2 primary lenses in BlueLogic.

- **GlareGone** - very effective during the day to reduce discomfort from the glare of computer screens, artificial lighting and at night, may be worn to reduce the glare from oncoming LED headlights.
- **SleepProtect** - reduces glare, and also filters the longer wavelengths of blue light to allow electronic device users (EDUs) to maintain a healthier sleep cycle, even when using devices at nights.

Both **GlareGone** and **SleepProtect** are available in plus powers to provide BEST acuity at the working distance. All BlueLogic lenses feature Melanin pigment to promote natural, accurate color perception.