



Resources / Reputable Vendors of Solar Filters & Viewers

Reputable Vendors of Solar Filters & Viewers



Here you'll find lists of reputable manufacturers and authorized dealers of solar filters and viewers; these include companies with which members of the **AAS Solar Eclipse Task Force** [/about-us] have had prior (and positive!) experience as well as companies whose products have been certified safe by authorities we recognize and whose certification we have confirmed to be genuine. *Your eyes are precious!* You don't need astronomers to tell you that, but you *do* need astronomers to tell you where to get safe solar filters: from the companies listed on this page. To do otherwise is to take unnecessary risks. If a supplier isn't listed here, that doesn't mean its products are unsafe — only that we have no knowledge of them or that we haven't

convinced ourselves they are safe. For more information see our **Eye Safety** [<https://eclipse.aas.org/eye-safety>] pages.

Note: It is now too late to buy solar viewers in time for August 21st. Virtually all vendors are sold out, whether or not they're listed as such below. See our pinhole projection page [<https://eclipse.aas.org/eye-safety/projection>] **for other ways to enjoy the partial phases of the eclipse.**

"Eclipse Glasses" & Handheld Viewers

The following telescope and solar-filter companies manufacture and/or sell eclipse glasses (sometimes called eclipse shades) and/or handheld solar viewers that have been verified by an accredited testing laboratory to meet the ISO 12312-2 international safety standard for such products. They are listed in alphabetical

order; those with an asterisk (*) are based outside the United States.

Solar Viewer Brands

- American Paper Optics (Eclipser) / EclipseGlasses.com / 3dglasseonline.com**
- APM Telescopes (Sunfilter Glasses)***
- Baader Planetarium (AstroSolar Silver/Gold Film)*** [see **note 1**]
- Celestron (EclipSmart Glasses & Viewers)**
- DayStar (Solar Glasses)**
- Explore Scientific (Solar Eclipse Sun Catcher Glasses)**
- Halo Solar Eclipse Spectacles**
- Jaxy Optical Instrument Co., Ltd.* [see **note 2**]
- Lunt Solar Systems (SUNsafe SUNglasses)** [see their **unique kid-size eclipse glasses**]
- Meade Instruments (EclipseView Glasses & Viewers)**
- Rainbow Symphony (Eclipse Shades)**
- Seymour Solar (Helios Glasses)**
- Solar Eclipse International / Cangnan County Qiwei Craft Co.***
- Thousand Oaks Optical (Silver-Black Polymer & SolarLite)**
- TSE 17 / 110th.de (Solar Filter Foil)***

[] Note 1: Baader Planetarium's AstroSolar Safety Film and AstroSolar Photo Film, sold in the U.S. by Alpine Astronomical and Astro-Physics (see **below [#baader]**), are not certified to meet the ISO 12312-2 international safety standard and are not designed to work as eclipse shades or handheld solar filters. Baader's AstroSolar Silver/Gold Film, on the other hand, does meet the ISO 12312-2 safety standard for filters for eyes-only direct viewing of the Sun.

[] Note 2: Jaxy doesn't sell direct to customers; they manufacture for other companies. Their solar viewers could be described as "too safe" — they block a bit more visible light than the ISO 12312-2 standard allows, rendering a safe but rather dim view of the Sun. Technically, they aren't compliant with ISO 12312-2, but because they are safe, and because several trustworthy vendors are selling eclipse glasses made by Jaxy, we include them here.

Numerous other astronomy- and science-related enterprises and organizations sell eclipse glasses made by the companies listed above. If you buy from any of the following businesses, you know you are getting ISO-compliant safe solar viewers:

Astronomy, Science & Optics Vendors

- Adler Planetarium** [sold out]
- Adorama Camera**
- Agena AstroProducts**
- Alpine Astronomical**
- AmericanEclipseUSA.com**
- American Museum of Natural History** [sold out]
- American Science & Surplus**
- AstroBox/EclipseKit.com**
- Astronomers Without Borders**
- Astronomical Society of the Pacific**
- Astronomy Magazine / My Science Shop**
- Astroshop.eu / Omegon**
- Astrozap Telescopes & Accessories**
- Avenues of the Sky**
- B&H Photo Video**
- Chabot Space & Science Center** [sold out]
- Charlie Bates Solar Astronomy Project**
- Company Seven**

- **Connecticut Science Center** [sold out]
- **David Chandler Company**
- **Daylight Sky**
- **Discover Magazine / My Science Shop**
- **EarthSky.org**
- **Eclipse2017.org**
- **Eclipse for a Cause** [sold out]
- **EclipseGlasses.co.uk**
- **EclipSpecs / Science Gear (iXXi)** [sold out]
- **EclipseStuff.com**
- **Education Harbour**
- **Explore One**
- **Flinn Scientific**
- **Fort Worth Museum of Science & History** [sold out]
- **GreatAmericanEclipse.com**
- **Great Lakes Science Center** [sold out]
- **Griffith Observatory** [sold out]
- **High Point Scientific**
- **ICSTARS**
- **Khan Scope Centre**
- **Land Sea & Sky**
- **Liberty Science Center** [sold out]
- **Lire la Nature & Astronomie Plus**
- **MMI Marketing**
- **Museum of Science, Boston** [sold out]
- **Museum of Science+Industry Chicago** [sold out]
- **NationalEclipse.com**
- **New York Hall of Science** [sold out]
- **Oceanside Photo & Telescope**
- **Online Science Mall**
- **Ontario Telescope & Accessories**
- **Optics Planet**
- **Orange County Telescope**
- **Orion Telescopes & Binoculars**
- **Science City at Union Station**
- **Sky & Telescope Magazine / Shop at Sky**
- **SkyNews Magazine**
- **Solar Specs**
- **Space Racers / AugustEclipse.com**

- **Space Update**
- **Spectrum Telescope** [sold out]
- **Starizona**
- **STEMcell Science Shop / Mudge Scientific**
- **Steve Spangler Science** [sold out]
- **The Planetary Society**
- **The Tech Museum of Innovation, San Jose** [sold out]
- **Woodland Hills Camera & Telescopes**

Some (not all) locations in the following retail chains sell ISO-compliant safe eclipse glasses and/or handheld viewers made by the companies listed at the top of this page, so you can confidently buy solar viewers if you find them in their stores — but *not* on their websites, as some chains use different suppliers for their websites than they do for their stores. Links are provided *only* to help you locate the retail store nearest you:

Retail Chains

- **7-Eleven**
- **Best Buy**
- **Bi-Mart**
- **Casey's General Store**
- **Hobby Town**
- **Kirklands**
- **Kroger**
- **London Drugs** [sold out]
- **Love's Travel Stops** [sold out]
- **Lowe's**
- **Maverik**
- **McDonald's** (Oregon only)
- **Pilot/Flying J**
- **Toys "R" Us** [sold out]
- **Walmart**

The following are some additional sellers of ISO-compliant safe solar viewers made by the companies listed at the top of this page.

Some of these have (or had) storefronts on Amazon.com, where there are (or were) also numerous sellers of solar viewers that we have not been able to confirm are safe. We recommend that you buy *only* from companies listed on this page and/or on **American Paper Optics' list of vendors that Amazon now stands behind** [<https://www.eclipseglasses.com/pages/amazon-approved-vendors>] , and *only* products made by one of the companies listed above under Solar Viewer Brands.

Online & Other Vendors

- **123 Sales**
- **2017Solar.com**
- **3Dstereo.com**
- **All Customer Brand**
- **Aoska** [sold out]
- **AYA Products**
- **AyoGu** [sold out]
- **Boboo** [sold out]
- **Cppslee**
- **Eclipse Seeker**
- **Educational Innovations**
- **Electronic Analyst**
- **Everyday D2C Products (U.S.)** [sold out]
- **Firefly Buys (FFB)**
- **Fred Meyer**
- **Freedom Hill**
- **HomeStarry**
- **iCUBE**
- **Inflatable4Less**
- **MascotKing** [sold out]
- **Mega-Fun Toys**
- **MOST** (Glitterins / Biomedical Research and Services)
- **Newbea** [sold out]
- **Off the Wall Toys & Gifts**
- **Onethe**
- **Real Solar Eclipse Glasses**

- **Rongyo** [sold out]
- **Run to Shop**
- **Skyhawk Ventures**
- **Solar Eclipse Spectacles** (paper glasses only)
- **Soluna/GSM Sales**
- **Squirrellynuts**
- **Tech Apparel / Zuzo**
- **ThinkGeek**
- **ToLoco / Yedasi**
- **ToGoSpa**
- **Vocoo** [sold out]
- **Webb Co. / Webb Collection**
- **Websun** [sold out]
- **Yeahbeer** [sold out]
- **Your 5 Star General Store**

FREE eclipse glasses from libraries: With support from NASA, Google, and the Gordon and Betty Moore Foundation, the Space Science Institute's STAR_Net initiative has distributed more than 2 million ISO-compliant safe solar eclipse glasses to more than 6,900 libraries all across the U.S. To find out which libraries near you are holding eclipse-related events and distributing free eclipse glasses, see the **library map on the STAR_Net website** [<http://spacescience.org/software/libraries>].

FREE eclipse glasses from NASA: With safety as its top priority, NASA has distributed more than 1.5 million ISO-compliant safe solar eclipse glasses to its officially designated viewing locations around the country, including sites of high-altitude balloon launches and Citizen CATE observations. See **NASA's event map** [<https://eclipse2017.nasa.gov/sites/default>] for viewing locations near you.

FREE eclipse glasses from Astronomers

Without Borders: The August 21st eclipse will be visible throughout the U.S., but many schools and other organizations in underserved communities and remote areas can't afford to purchase safe eclipse glasses. **Astronomers Without Borders** [<https://astronomerswithoutborders.org/awb-programs/resource-sharing-programs/eclipse-glasses-giveaway.html>] is giving away ISO-compliant safe solar eclipse glasses to needy groups willing and able to pay the cost of shipping and seeks donations to offset the cost of the glasses.

Other sources: What if you received eclipse glasses or a handheld solar viewer from a relative, friend, neighbor, or acquaintance? If that person is an amateur or professional astronomer — and astronomers have been handing out eclipse viewers like Halloween candy lately — they're almost certainly ISO-compliant, because astronomers get their solar filters from sources they know and trust (in other words, from the ones listed on this page). Ditto for professional astronomical organizations (including college and university physics and astronomy departments) and amateur-astronomy clubs.

If you bought or were given eclipse viewers at a science museum or planetarium, or at an astronomy trade show, again you're almost certainly in possession of ISO-compliant filters. As long as you can trace your filters to a reputable vendor or other reliable source, and as long as they have the ISO logo and a statement attesting to their ISO 12312-2 compliance, you should have

nothing to worry about. What you absolutely should *not* do is search for eclipse glasses on the internet and buy whatever pops up in the ads or search results. Buy from one of sources listed here instead.

*Be sure to read our **safety tips** [/eye-safety/eyewear-viewers] before using "eclipse glasses" or handheld viewers, and see "**How to Tell If Your Eclipse Glasses or Handheld Solar Viewers Are Safe** [<https://eclipse.aas.org/eye-safety/iso-certification>] " for additional important information.*

[] Solar Filters for Telescopes, Binoculars & Camera Lenses

Solar filters for optics are meant to go over the aperture, i.e., the front opening, and should be used only by experienced observers. Four of the sources listed below — Alpine Astronomical, Astro-Physics, Baader Planetarium, and Kendrick Astro Instruments — sell aperture filters made from Baader AstroSolar Safety Film. While this material, unlike the newer AstroSolar Silver/Gold Film (see **above** [#asg]), does not meet the ISO 12312-2 international safety standard for eyes-only direct viewing of the Sun — it transmits slightly more ultraviolet light than the standard allows — it has been safely used by amateur and professional astronomers for several decades for observing and/or imaging the Sun through telescopes, binoculars, and camera lenses (whose glass elements filter out the excess ultraviolet light).

- **Alpine Astronomical**
- **Astro-Physics, Inc.**
- **Baader Planetarium**
- **Celestron**
- **DayStar Filters**
- **Galileo Optics** (Division of Cosmo Brands, Inc.)
- **ICSTARS**
- **iOptron**
- **Kendrick Astro Instruments**
- **Marumi / Argraph Corp.**
- **Meade Instruments**
- **MrStarGuy / Vixen**
- **Orion Telescopes & Binoculars**
- **Rainbow Symphony**
- **Seymour Solar**
- **Spectrum Telescope**
- **Thousand Oaks Optical**

Many of the astronomy- and science-related enterprises and organizations listed above, as well as others that advertise in magazines such as *Astronomy* and *Sky & Telescope*, sell aperture solar filters from one or more of the manufacturers named here. As long as you know what brand you're getting and that brand is listed on this page, you should be OK. *Warning:* Solar filters designed to thread into an eyepiece at the back end of the telescope, where you put your eye, are dangerous; sunlight concentrated by your optics could destroy it and injure your eye in a flash — literally. If you have such a filter, discard it.

We'll say it again: a solar filter must be attached to the *front* of your telescope, binoculars, or camera lens.

To find telescopes and binoculars specially made for observing the Sun, see the Special-Purpose Solar Binoculars & Telescopes section of our **Telescopes & Binoculars** [<https://eclipse.aas.org/resources/telescope-binoculars>] page.

*Be sure to read our **safety tips** [/eye-safety/optics-filters] before using solar filters with any optical device!*

Solar Optical Projectors

The following devices are used for indirect solar observation. They use lenses and mirrors to project an image of the Sun onto a white surface. In other words, you don't look *through* them — you look *at* them.

- **Sunspotter** (Starlab / Science First)
- **Solarscope** (Solarscope USA)
- **Build-It-Yourself Safe Solar Viewer** (T. R. Richardson, College of Charleston, SC)

*Be sure to read our **safety tips** [/eye-safety/projection] before using a solar optical projector!*