DOLBY, 3D



The Best-in-Class Glasses-Free 3D

In the movie theatre, moviegoers accept 3D glasses as part of the 3D experience. But watching 3D at home is different. TV is a social experience: viewers want to crowd around and enjoy watching together. Glasses make that experience impossible to achieve. That's why 3D in the home will not succeed until viewers can enjoy 3D content without glasses—and without thinking about it. Dolby® 3D will drive the revolution to make the glasses-free experience a reality.



Dolby 3D will change the way that people expect to experience 3D at home or on devices like tablets and mobile phones. First and foremost, Dolby 3D makes 3D content simply look better. But it also frees viewers from wearing uncomfortable glasses that pull them out of the story and often make them want to give up on a complex 3D experience that doesn't keep their attention.

Dolby 3D is easy—there's nothing to think about. You sit down and watch—on your own or with your family or friends. Dolby 3D works in such a way that it expands the way groups can watch 3D, too. The 3D looks great from everywhere in the room—realistic, lifelike, and immersive—without being constrained to narrow sweet spots.

Dolby 3D will make 3D an exciting experience that will be a must-have for consumers in their TV-buying purchase. It will take 3D out of the realm of a "trend" feature for HDTVs and into what we will come to expect in TVs in the near future.

What's more, 3D content will become far more widely available. There will be no need for "dedicated" 3D channels—3D content can mix freely with any non-3D content— again, taking 3D from a limited niche to something that integrates into viewers' day-to-day experience of programs of all kinds—from film to live sports and beyond.

The dream of 3D comes true when we can ensure that 3D works better through every part of the entertainment delivery chain—from the way in which the 3D content is created to the way the viewer experiences it. That's why Dolby and Philips have designed Dolby 3D to deliver the 3D content along with intelligent information about how the content creator intended it to look. This information enables the TV or smaller device to perfect the imagery on the screen—so it truly looks its best in all viewing environments.

Content distributors win because an increasing number of consumers will be willing to pay extra for the ability to get the best 3D experience of the content they choose to watch.



The Best Playback Experience for Consumers

Consumers are the ultimate winners with glasses-free Dolby 3D. For one, they are finally free from glasses that can, in the best-case scenario, pull them out of the story and, in the worst-case scenario, cause discomfort and even headaches.

Consumers are also free to watch 3D content in more places—on portable devices such as tablets and smartphones equipped with Dolby enabled displays that can deliver beautiful Dolby 3D content. Moreover, they're able to customize the 3D image to their preference and comfort level.

The Right Path for Content and Distribution

Using the Dolby 3D format, content creators will know that the content they create will reach the playback device in the way that they intended. For the first time, artists will be able to tell their story in a way that truly delights and engages the viewer—in all-new settings beyond the cinema.

As a true end-to-end platform, the Dolby 3D format delivers both artistic and practical advantages. It allows studios to maintain the integrity of their creative intent by controlling content through the entire chain. It also ensures a consistent format and picture quality across all stages of content interchange.

The format uses available metadata from production to generate high-quality depth maps for autostereoscopic viewing. Dolby 3D maximizes the available depth range and intelligently maintains the director's placement of objects there, assuring the right viewer focus. On playback, the Dolby 3D format decoder works with compressed depth maps and embedded metadata to provide accurate rendering of pre-encoded features for glasses-free 3D displays. It extracts the intended depth for autostereoscopic viewing, providing highly effective 3D that is very comfortable to watch.

The Dolby 3D format is deeply integrated in the content-creation workflow and requires only minimal incremental changes to stereoscopic content-creation tools. Operators and aggregators can prepare and transmit content with the highest-quality 3D while retaining bandwidth efficiency.

Clear Device Differentiation for Device OEMs

Device manufacturers who choose Dolby 3D today will be able to differentiate their premium television offerings by providing the best 3D experience in the marketplace.

Devices will use the Dolby 3D format to process depth maps and additional metadata embedded in the stream, boosting the glasses-free 3D viewing experience, improving the perceived depth effect, and delivering a sharper picture, free of artifacts. And on any device, Dolby 3D always preserves the original intent of the content creator by ensuring consistent format and quality.

The Dolby 3D decoder also includes all the essential features for a great 3D experience, such as real-time conversion of 2D content to 3D and a state-of-the-art multiview rendering engine that eliminates narrow sweet spots and creates smooth viewing transitions.

Dolby 3D was developed through a joint project between Dolby and Philips.

To learn more about Dolby 3D, visit dolby.com/glassesfree3D.

Dolby 3D Components

- · Content tool plug-in
- Real-time metadata preprocessor
- Dolby 3D format encoder
- · Dolby 3D format decoder
- Real-time depth extraction and enhancement engine
- Multiview rendering engine

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