A new era of storytelling

The transition from standard dynamic range (SDR) to high dynamic range (HDR) represents as significant a change as the transition from SD to HD, and from black and white to color.

We’re finally able to deliver the amazing imaging that modern cameras have been able to capture for years. But this technology brings with it new challenges that disrupt familiar workflows, introduce complexity, and jeopardize the ability to deliver a consistent look across a multitude of devices.

The Dolby Vision™ integrated workflow gives you the tools needed to efficiently create wide color gamut and high dynamic range content and ensures that the look you create in the color suite stays true when experienced across TVs, laptops, and mobile.
Create the best HDR experience

Reveal extraordinary color
Dolby Vision delivers more accurate color than SDR and generic HDR. Punch out bright blue skies without getting washed-out grays. Dial in deep reds and maintain shadows and texture. Saturate color for the most accurate and lifelike images you’ve ever created. Minimize banding beyond the limitations of HDR10 thanks to 12-bit color gradient.

Bring new depth to your content
With Dolby Vision HDR imaging, you get bolder highlights and incredible contrast. That means greater sharpness, depth, and more detailed shadows to expand your storytelling possibilities like never before.

Your grade, delivered across all devices
Viewers consume content across a multitude of devices — TVs, tablets, and mobile — all with different brightness capabilities and color performance. To overcome the challenge of mastering for these variables, Dolby Vision empowers the colorist to define the dynamic metadata that maps the content to each device, so it plays back with ultimate consistency.
The best viewing experience — for today and tomorrow

When you master content in Dolby Vision, you map it to the capabilities of today’s TVs. So, when future generations of devices surpass what’s available today, your Dolby Vision content will map correctly, maintaining your grade and never stretching your content.

Save time and money

Using the Dolby Vision workflow, you can master once to create all of your deliverables. Grade your content with the most advanced HDR toolset and efficiently generate Dolby Vision HDR, generic HDR10, and SDR media.
Compare Dolby Vision
<table>
<thead>
<tr>
<th></th>
<th>Dolby Vision</th>
<th>Generic HDR</th>
<th>SDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bit depth (higher bit depth = less color banding)</td>
<td>12 bit (4096 shades per color)</td>
<td>10 bit (1023 shades per color)</td>
<td>8 bit (256 shades per color)</td>
</tr>
<tr>
<td>Color gamut</td>
<td>P3 up to Rec. 2020</td>
<td>P3 up to Rec. 2020</td>
<td>Rec. 709</td>
</tr>
<tr>
<td>Mastering luminance</td>
<td>1000 min. up to 4000</td>
<td>1000</td>
<td>100</td>
</tr>
<tr>
<td>Dynamic metadata</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trims for dynamic metadata</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastered by creatives in color suite</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
The home color-grading workflow

Create your Dolby Vision master grade using your existing color-grading workflows.

Creating the Dolby Vision master grade begins with simply dialing in your master HDR grade using a compatible professional color-grading application set to PQ (the SMPTE® standard for HDR video luminance pioneered by Dolby.)

In order to see the high brightness levels, deep blacks, and wide color gamut needed to make the best creative decisions, it’s important to rely on an HDR reference grade mastering monitor that meets the Dolby Vision minimum specifications.

When the master HDR grade is done, you simply run the Dolby Vision analysis to generate metadata that describes the creative decisions made for each shot.

This function is integrated into your Dolby Vision compatible color correction application and maps the content in real time, to HDR displays as well as SDR Rec. 709 at a standard brightness of 100 nits. At this stage, you can check the mapping and make adjustments desired to confirm the creative intent of the HDR master.
Home color grading

Dolby Vision license and activation tools → Color-grading system → HDR

Content mapping unit

SDR

100 nit Rec. 709

Color correction master output

Metadata

16-bit TIFF sequence

HDR monitor

SDR monitor

HDR
The home mastering and QC workflow

Create all your high-quality deliverables using the Dolby Vision master grade.

Once the color grading is complete, you export the final grade as a 16-bit TIFF image sequence or ProRes 4444 XQ file, and the Dolby Vision dynamic metadata as an XML file.

These are imported into a Dolby Vision compatible mastering tool to create the mezzanine file. For this process you can use the Dolby® Professional Tools, which are included with the Dolby Vision license, or a supported mastering solution.

After the mezzanine is QCed by decoding the image and metadata to a target reference display, it’s ready for Dolby Vision encoding by compatible encoder which generates a Dolby Vision HEVC bit stream.

You can also render out other physical stand-alone deliverables like generic HDR and SDR Rec. 709 versions, as well as IMF/IMP deliverables, all based off your Dolby Vision mezzanine.
Deliverables

- Color correction master output
- Metadata
- 16-bit TIFF sequence

→ Dolby Vision compatible mastering tools

→ Dolby Vision mezzanine (MXF — 12-bit RGB, J2K, and XML)

→ Generic HDR

→ Rec. 709 100 nit
Bring Dolby Vision to your master suite

Unlock the most powerful, comprehensive HDR mastering tools in your professional color-grading system with a Dolby Vision license.

**Dolby Vision mastering and playback annual license**

Authorizes color-grading (or mastering/QC) system to enable Dolby Vision capabilities, controls, and connection to Content Mapping Unit (CMU)

Includes Dolby Vision professional software tools:

- **CMU** software for real-time monitoring of Rec. 709 and other targets
- **Content Mapping Offline** software tool for rendering Rec. 709 and other deliverables
- **Mezzinator** software tool for creating Dolby Vision mezzanine file
- **Metafier** software tool for editing and verifying XML metadata

**Required materials not included**

Content Mapping Unit (CMU) hardware

- The CMU software runs on standard hardware and is required to fully enable Dolby Vision functionality in third-party systems that support Dolby Vision. The hardware is not included and can be purchased separately from an authorized system integrator.

Color-grading, mastering, packaging, or QC system

- Compatible solutions include Baselight, DaVinci Resolve®, Autodesk Lustre, and Nucoda FilmMaster.

Reference monitor

- A reference monitor must meet minimum spec as shown in the diagram on the right.
Integrate Dolby Vision into your workflow

Color-grading systems compatible with Dolby Vision
• FilmLight Baselight
• Blackmagic Design DaVinci Resolve
• Autodesk Lustre
• Nucoda FilmMaster
• S-A-M Quantel Rio

Dolby Vision ecosystem solutions for editorial and QC
• MTI Film Cortex Enterprise
• Rohde & Schwarz® Clipster
• Colorfront Transkoder
• Marquise Technology MIST

Dolby Vision resellers for approved CMU workstation
• Americas: New Media Hollywood
• Europe: Contact Ian Lowe
• Asia Pacific: Altec International Ltd

Minimum specifications
• 1,000 nit (peak luminance)
• 200,000:1 (contrast ratio)
• P3 (color volume)
• SMPTE 2084 EOTF (PQ)
Dolby Vision Facility Certification

Provide the absolute best quality and service to your customer by getting the training and the highest level of support direct from Dolby.

With Dolby Vision Facility Certification, your clients get the assurance that your colorists and QC personnel have been trained by Dolby and that your facility has been commissioned by Dolby engineers.

What you get with the certification program

• Commissioning of the Dolby Vision software
• Annual training for engineers and operators
• Dolby Vision logo and marketing rights as a Dolby certified service provider
• Listing on Dolby.com as a Dolby certified facility
• Your facility is included in monthly materials given to studios and key content creators
Why should I certify my facility?

Save time and money
Hit the ground running by becoming a Dolby Vision Certified Facility. This certification ensures that your gear is configured, set up to optimum specifications, and ready to take on your first project.

Maximize efficiency and avoid rejections with proven workflows
We’ve worked closely with post production partners, mastering over 100 Hollywood titles, to refine the best workflows. Thorough training for your staff ensures that the job gets done right the first time, from encoding to QC.
Benefit from over 10 years of research in HDR

Dolby’s investment in testing and improving the visual experience led to the creation of SMPTE 2084 perceptual quantization specification (the basis for all HDR TVs) and SMPTE 2086 dynamic metadata specification. We’ve created the most efficient method for generating all the deliverables you need at the highest quality, while ensuring you maintain the artistic intent of the master grade.

Leverage the Dolby brand and reach

Dolby’s website is updated monthly to promote the most current list of Dolby Vision certified facilities to assure the studios that your facility is trained, has the proper equipment, and follows the best-practice workflow guidelines for creating the highest-quality content.
Learn more

Contact a Dolby representative today at info.dolbyvision@dolby.com

For more information, go to dolby.com/DolbyVisionPro